ORDER NO. VRD0206025C2

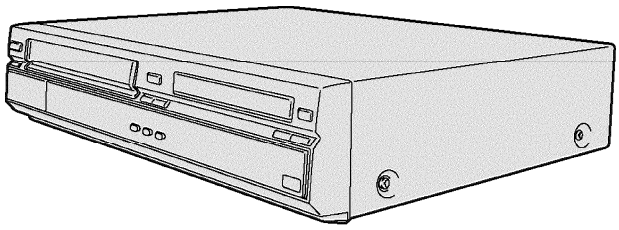
Service Manual

DVD Player/ Video Cassette Recorder

Panasonic VHS PAL VHS PAL SECAM

NV-VHD1B / NV-VHD1EC / NV-VHD1EE / NV-VHD1F

Z-MECHANISM



SPECIFICATIONS

SPECIFICATIONS

ITEM	SPECIFICATION	
POWER	SOURCE: 220-240 V AC 50/60 Hz	
	CONSUMPTION: 28 watts CONSUMPTION WHEN IN STANDBY MODE: Approx. 7W	
RECORDING SYSTEM	2 rotary heads, helical scanning system	
	PAL (NV-VHD1B/EC/EE/F) SECAM (NV-VHD1F)	
PLAYABLE DISCTYPE	DVD-Video, DVD-R (R4.7), Video-CD, CD-Audio (CD-DA), CD-R/CD-RW (CD-DA, Video CD formatted discs), MP3	
DVD SIGNAL SYSTEM	PAL 625/50, PAL 525/60, NTSC	
PICK UP	Wave length: 658nm/790nm Laser Power: CLASS 2A/CLASS 1	
TV TUNER SYSTEM	NV-VHD1B	UHF: CH21-CH68
	NV-VHD1EC	VHF: CHE2-CHE12 UHF: CH21-CH69
	NV-VHD1EE	VHF (OIRT): CHR1-CHR12 (CCIR): CHE2-CHE12 UHF: CH21-CH69 CATV (OIRT): 44MHz-470MHz (CCIR): S1-S5, M1-U10, S21-S41 (8MHz Raster)
	NV-VHD1F	VHF: SECAM CH2-CH10 PAL CHE2-CHE12 UHF: SECAM CH21-CH69 PAL CH21-CH69 CATV: SECAM B-Q, S21-S41 PAL CHS01-CHS41
RF OUT SYSTEM	NV-VHD1B	UHF: CH21-CH68 71 ± 3 dBμ, 75 Ω close
	NV-VHD1EC	UHF: CH21-CH69 71 ± 3 dBμ, 75 Ω close
	NV-VHD1EE	UHF: CH21-CH69 71 ± 3 dBμ, 75 Ω close
	NV-VHD1F	Without RF converter
VIDEO	HEADS: 4 rotary heads 1 pair for recording and playback (L-R heads) 1 pair for trick play (L'-R' heads)	
	INPUT: EURO AV (AV1/AV2) Connector (21 pin) 1.0 Vp-p, 75 Ω terminated VIDEO IN (AV3:FRONT) Connector (Phono type) 1.0 Vp-p, 75 Ω terminated	
	OUTPUT: EURO AV (AV1/AV2) Connector (21 pin) 1.0 Vp-p, 75 Ω terminated VHS/DVD (Phono type) 1.0 Vp-p, 75 Ω terminated DVD ONLY (Phono type) 1.0 Vp-p, 75 Ω terminated S-VIDEO Y; 1.0 Vp-p, 75 Ω terminated C; 0.3 Vp-p (PAL), 75 Ω terminated C; 0.286 Vp-p (NTSC), 75 Ω terminated RGB (21 pin AV) 0.7 Vp-p, 75 Ω terminated	

ITEM	SPECIFICATION
AUDIO	HEAD: 1 Stationary head (Normal-mono only) 2 channels (Hi-Fi Sound-Stereo)
	INPUT: EURO AV (AV1/AV2) Connector (21 pin) -6dBV (500 mV), More than 10 kΩ AUDIO IN (AV3:FRONT) Connector (Phono type) -6dBV (500 mV), More than 10 kΩ
	OUTPUT: VHS/DVD, DVD only, Sub woofer (Phono type) -6 dBV (500mV), Less than 1kΩ EURO AV (AV1/AV2) Connector (21 pin) -6 dBV (500mV), Less than 1kΩ DVD Optical digital output
AUDIO CHARACTERI-STICS	S/N ratio: Normal More than SP; 43 dB HIFI 65 dB DVD 115 dB FREQUENCY RESPONSE: Normal 80 Hz-8 kHz Hi-Fi 20 Hz-20 kHz DVD (linear audio) 4 Hz-22 kHz (48 kHz sampling) 4 Hz-44 kHz (96 kHz sampling) CD audio 4 Hz-20 kHz
DYNAMIC RANGE	VCR: More than 90 dB DVD (linear audio): More than 98 dB CD audio: More than 98 dB
TAPE SPEED	SP: 23.39 mm/s LP: 11.695 mm/s EP: 7.796 mm/s Record/Playback Time: SP: 4 hours with 240 min. type tape LP: 8 hours with 240 min. type tape EP: 12 hours with 240min type tape FF/REW Time: 60 sec. with 180 min. type tape
REGION NUMBER	Region No. 2
OPERATING TEMPERATURE	5°C - 40°C
OPERATING HUMIDITY	35% - 80%
DIMENSIONS	430 (W)×89(H)×345(D) mm
WEIGHT	5.2 kg
STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. AC Mains Lead 1 pc. Infra-red Remote Controller 1 pc. 21 Pin AV cable (NV-VHD1F)

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. INTRODUCTION

This service manual contains technical information which will allow service personnel to understand and service this model.

If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

Note:
Adjustment procedures, Disassembly Procedures and Assembly Procedures for VCR Mechanism Chassis are separate volume from this service manual.
Please refer to the service manual for Z-Mechanism Chassis. (Order No. VRD9802005C2)

2. SAFETY PRECAUTIONS

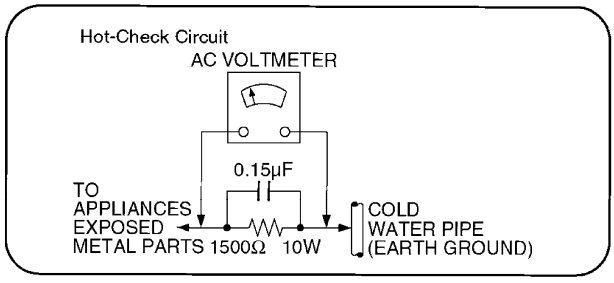
2.1. GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

2.1.1. LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to thechassis, the reading should be between 1MΩ and 5.2MΩ.
   When the exposed metal does not have a return path to the chassis, the reading must be ∞.

Figure 1



2.1.2. LEAKAGE CURRENT HOT CHECK (See Figure 1 .)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation

transformer for this check.

2. Connect a 1.5k Ω , 10 watts resistor, in parallel with a 0.15 μ F capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current mu3st not exceed 1/2 milliamp. In case a measurement is outsideof the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

3. PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistorsand semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available dischargingESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as alminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal

devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.

5. **Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.**
6. **Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, alminum foil or comparableconductive material).**
7. **Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.**

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. **Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient todamage an ES device).**

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

4. PRECAUTION OF LASER DIODE

CAUTION:

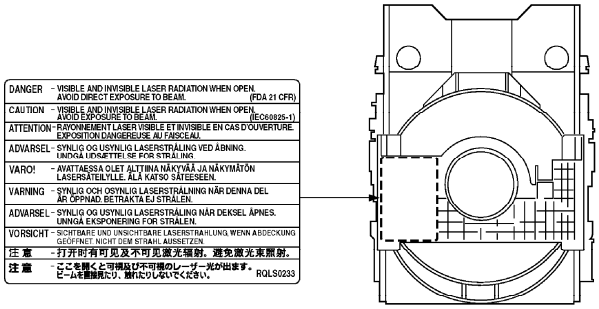
This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.
Wave length:658 nm/790 nm
Maximum output radiation power from pickup: 100 μ W/VDE
Laser radiation from the pickup lens is safety level,but be sure the followings:

1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.

ACHTUNG:

Dieses Produkt enthält eine Laserdiode.
Im eingeschalteten Zustand wird unsichtbare Leserstrahlung von der Laserinheit adgestrahit.
Wellenlänge: 658 nm/790 nm
Maximale Strahlungsleistung der Lasereinheit: 100 μ W/VDE
Die Strahlungan der Lasereinheit ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinhit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlines blicken.
4. Nicht über längere Zeit in die Fokussierlines blicken.


DANGER - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR)
CAUTION - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (IEC60825-1)
ATTENTION - RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL - SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO! - AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING - SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL - SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT - SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
注 意 - 打开时有可见及不可见激光辐射。避免激光束照射。
注 意 - ここを開くと可視及び不可視のレーザー光が出ます。ビームを直接見たり、触れたりしないでください。
RQLS0233

CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

5. GENERAL DESCRIPTION

5.1. OPERATING INSTRUCTIONS

5.2. SERVICE CAUTION

5.2.1. REPLACING IC7702/EEPROM

When the EEPROM: IC7702 is replaced, applicable model code, option code and electrical adjustment data will not be available.
Therefore, enter and/or adjust the necessary data after replacing IC7702 by referring following procedure.

STEP1.REPLACE THE IC7702

1. Remove the C.B.A. with Mechanism unit by referring the Disassembly procedure.

2. Disconnect the AC plug and replace the IC7702.

STEP2.INPUT THE MODEL & OPTION CODE

1. Set up the applicable model code and option code by ordering the following table.

PROCEDURE	F.I.P. DISPLAY
Turn on the Service Mode **1.Press the FF key and the EJECT key simultaneously for more than 3 seconds.**	
Activate the Service Mode 2 **2.While keep placing FF key, press the EJECT key in twice.**	
Activate the Entering Mode. **3.Press the EJECT key for more than 3 seconds.**	
Set the Mode 2. **4.Press the CH UP key in twice.**	
Display the Setting Code. **5.Press the POWER Button to turn the power on.**	 **(Colon starts flashing)**
Enter the Model and Option Code. **6.Service Screen is displayed on the monitor.** **7.Set the applicable Model and Option code by using REW, PLAY, STOP and FF keys on theRemote Controller. (See Fig.S1 & S2)**	
Exit from Service Mode. **8.Press the POWER Button to turn the power off.** **9. Press FF and EJECT keys simultaneously in 6 times.**	 **(Normal Indication)**

Fig.S1 Service Screen (sample)

Panasonic VCR

Service

MAIN	VXKJ0.07 ＊＊
Time ref. pos.	NONE
Last error code	00
Model Code	81 (51h)
Option Code 1	8 (08h)
Option Code 2	212 (D4h)
Option Code 3	6 (06h)
Clock adjust	+ 0
VPS/PDC default	OFF (depend)

Model No.	Model Code	Option Code 1	Option Code 2	Option Code 3
NV-VHD1B	99 (63h)	40 (28h)	244 (F4h)	5 (5h)
NV-VHD1EC	98 (62h)	8 (8h)	244 (F4h)	6 (6h)
NV-VHD1EE	102 (66h)	8 (8h)	244 (F4h)	6 (6h)
NV-VHD1F	101 (65h)	8 (8h)	244 (F4h)	6 (6h)

Fig. S2 Model Code & Option Code

NOTE:
Since all electrical adjustments data is still not available, perform the Electrical Adjustment continuously.

5.2.2. CYLINDER UNIT REPLACEMENT

1. CYLINDER UNIT REPLACEMENT

A. Remove the mechanism unit from MAIN C.B.A./Chassis by referring "SECTION 2. Disassembly Procedure".

B. Remove the 3 screws (A) of the CYLINDER UNIT with a screw driver.

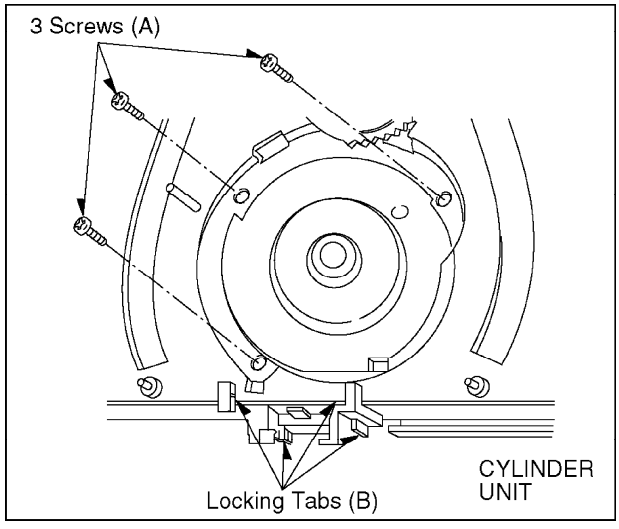
C. Unlock the 4 locking tabs (B) and disconnect the Cylinder flexible card from the FPC Holder.

D. Remove the CYLINDER UNIT.

CAUTION:

Handle the Cylinder flexible card with care. When it damaged, you should replace whole Cylinder unit.

Fig. S3



2. UPPER CYLINDER DISASSEMBLY

A. Remove 2 screws (A).

B. Remove the Cylinder Stator Unit.

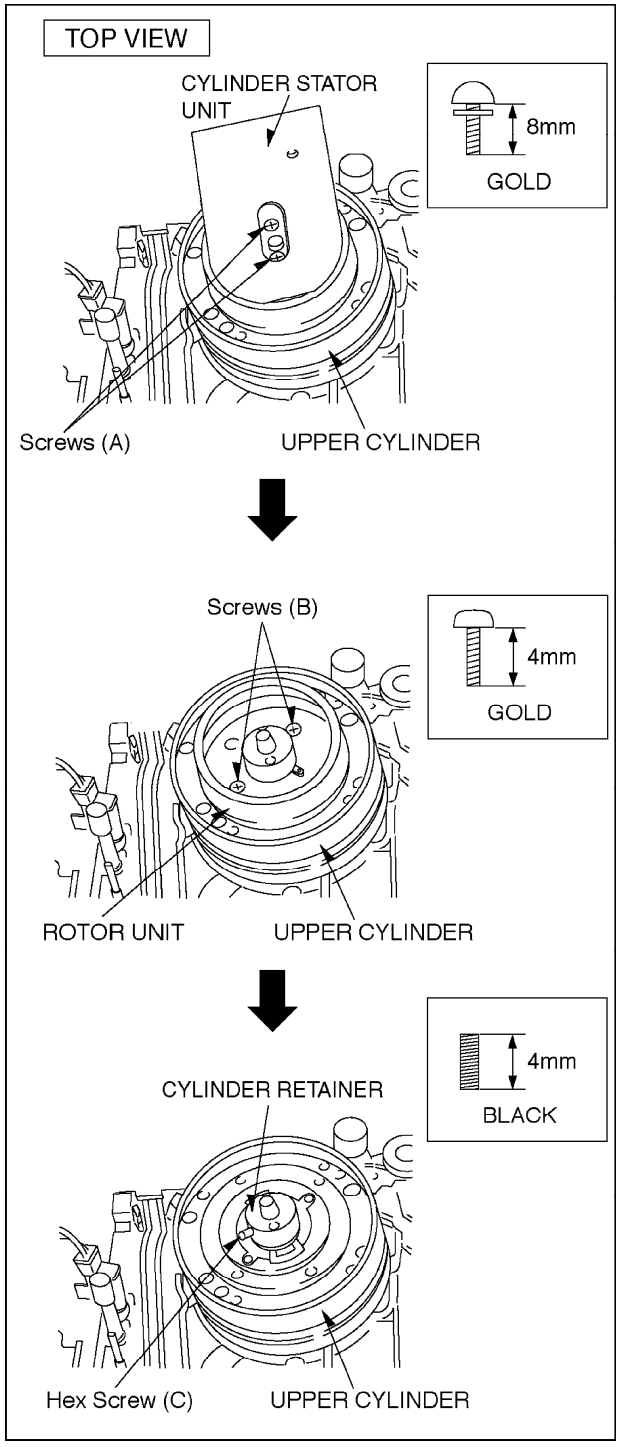
C. Remove 2 screws (B).

D. Remove the Cylinder Rotor Unit.

E. Loose Hex screw (C) (1.5 mm) and remove the CYLINDER RETAINER.

F. Remove the Upper Cylinder.

Fig. S4



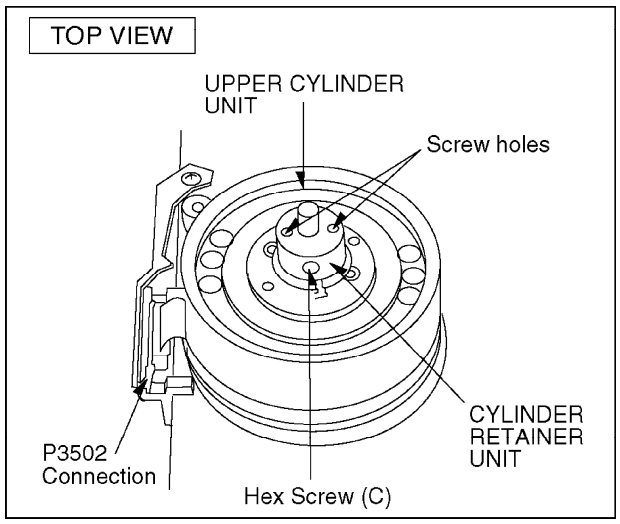
3. UPPER CYLINDER ASSEMBLY

When reassembling, perform the steps in the reverse order.

Notes:

1. **Install the Cylinder Retainer so that the 2 holes on top of the Cylinder Retainer are at right angles with the P3502 Connection.**
2. **Tighten the Hex screw (C) (1.5 mm) while pressing down on top of the Cylinder Retainer.**

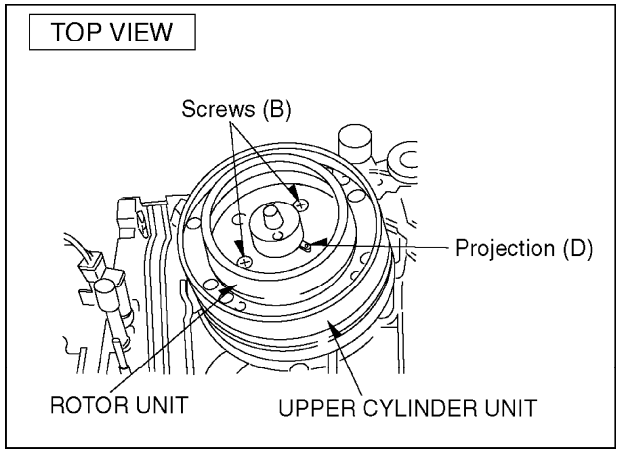
Fig. S5



3. Install the Cylinder Rotor Unit so that the inner hole of the Cylinder Rotor Unit fits to the small projection (D) on top of the Upper Cylinder.

4. Tighten 2 screws (B).

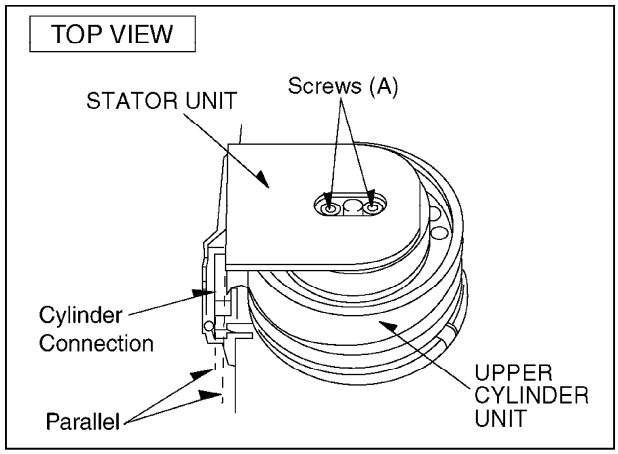
Fig. S6



5. install the Cylinder Stator Unit.

6. Tighten 2 screws (A).

Fig. S7

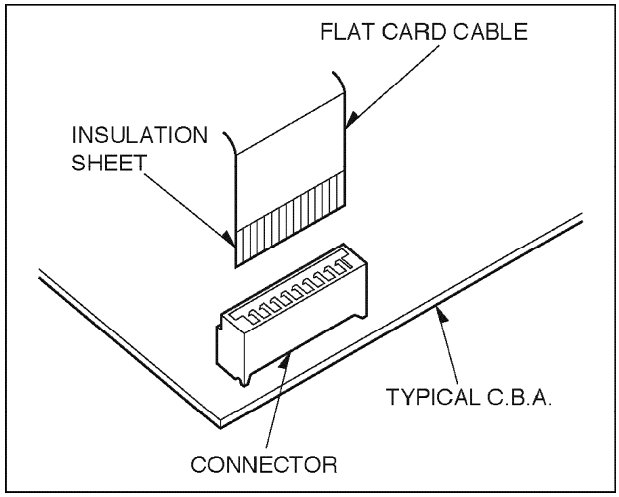


7. Confirm the PG SHIFTER ADJUSTMENT with the alignment tape (PAL: VFJ8125H3F) and adjust it if necessary.

5.2.3. FLAT CARD CABLE INSTALLATION

When installing the Flat Card Cable on the connector, install the Flat Card Cable with the cable contacts facing the connector contacts.

Fig. S8



5.3. REMOVAL OF CASSETTE TAPE

There are 2 ways to remove a cassette tape.

1. Service Information Display Operation

A. Press the FF and EJECT keys simultaneosly for 3 seconds and set the Service Mode 7.

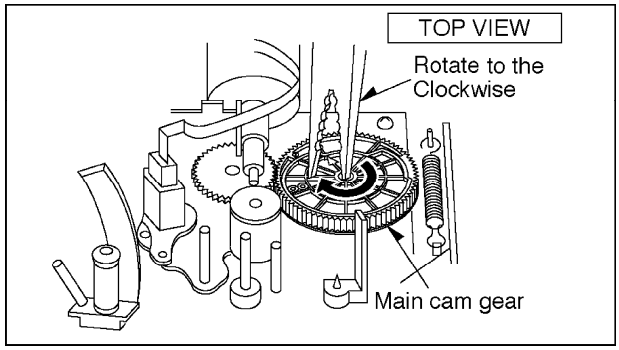
B. Press STOP key in order to rotate the Loading Motor for unloading operation. (Pay an attention of tape slack)

2. Manual Operation

A. Disconnect the AC Mains Lead and remove the Top Panel.

B. Rotate the Main Cam Gear clockwise until the Loading Posts move to fully unloaded position as shown in Fig. S9. (Tape is remaining)

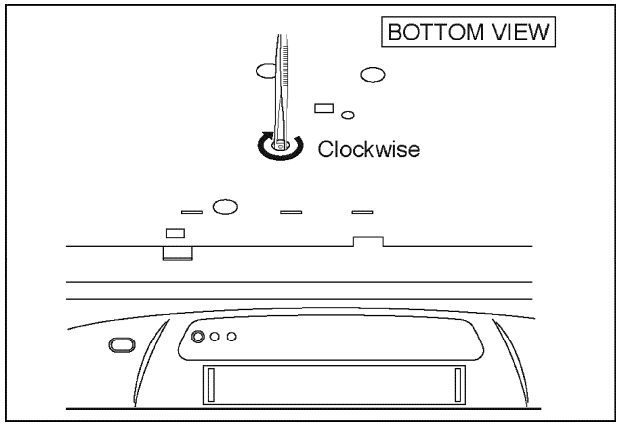
Fig. S9



C. Rotate the Capstan Motor clockwise from the bottom side to take

up the tape.

Fig. S10



D. Rotate the Main Cam Gear clockwise until the cassette tape is ejected.

5.4. INTRODUCTION OF VIDEO HEAD CLEANING CASSETTE / (POLISHING TYPE)

1. **We are pleased to introduce Panasonic Video Head Cleaning Cassette, VFK0923FT [for service purposes] and VFK0923FSE [for end users] for all VHS/SVHS VCP and VCR.**
2. **These cleaning cassettes are exclusive removing the hard and sticky clogging on video heads.**
3. **These improve the efficiency of video head cleaning service and shortening cleaning time for end users.**

VFK0923FT (For Service usage)	
Type of Cassette	Full VHS Cassette
Cleaning Time	10 Seconds/Time
Tape Length	20 m
Usability in a Path	180 Times

VFK0823FSE (For end users)	
Type of Cassette	Full VHS Cassette
Cleaning Time	10 Seconds/Time
Tape Length	3.34 m
Usability in a Path	30 Times

Note:

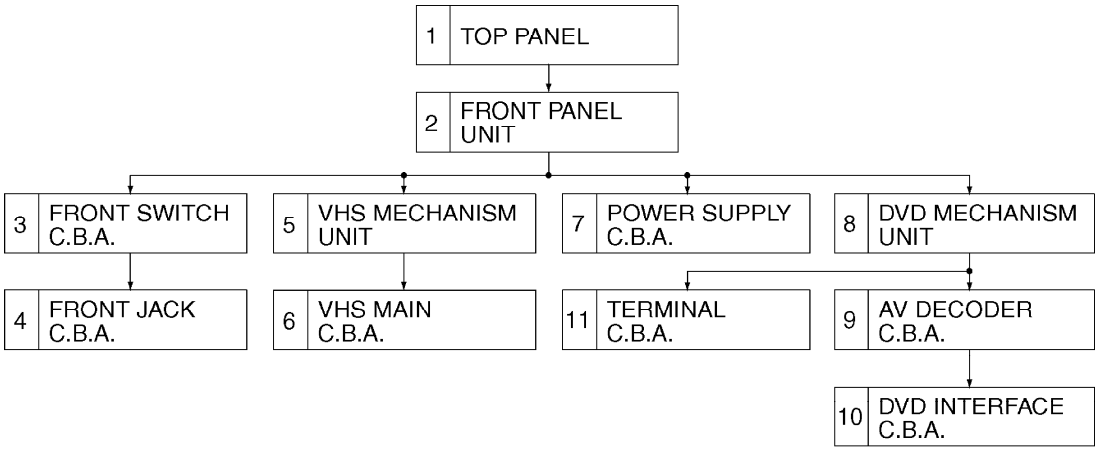
The tape material itself is the same in both types.

6. ADJUSTMENT PROCEDURES

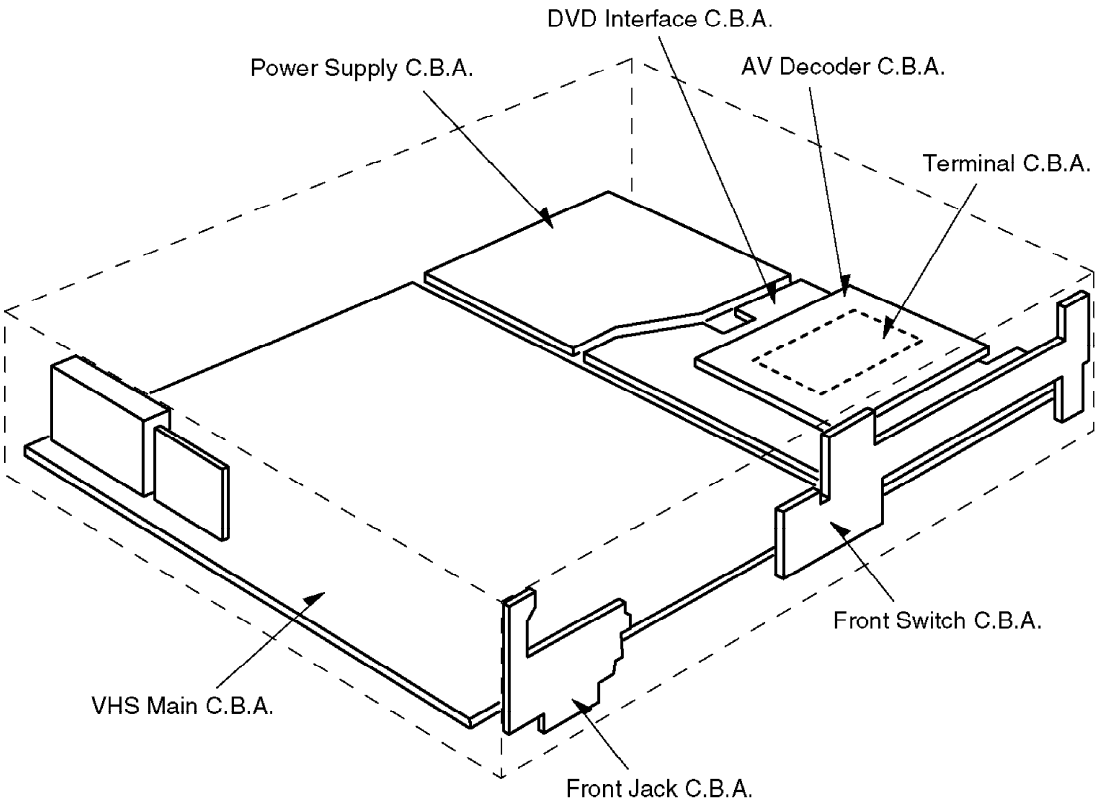
6.1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing.

When reassembling, perform the steps in the reverse order.



6.2. CIRCUIT BOARD LAYOUT

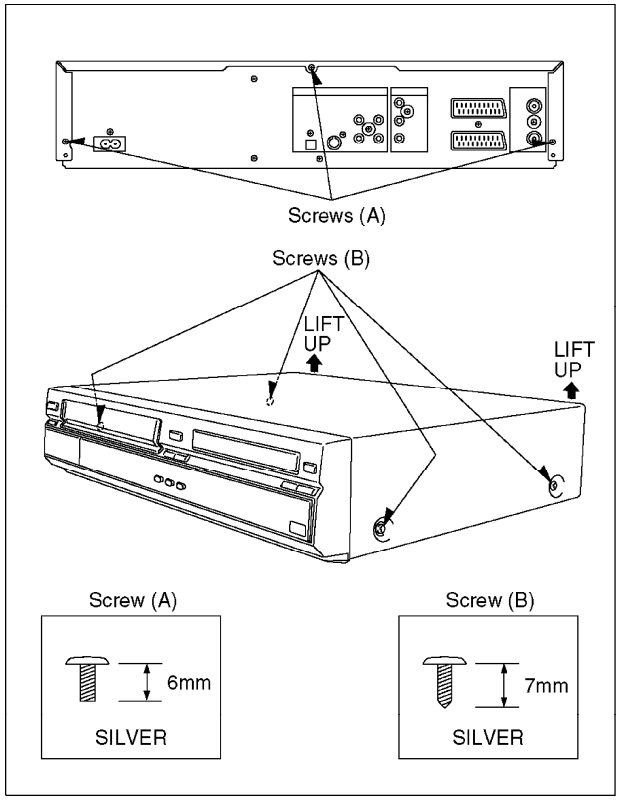


6.3. DETAIL OF DISASSEMBLY

1. REMOVAL OF THE TOP PANEL

Remove	**3 Screws (A)**
Remove	**4 Screws (B)**

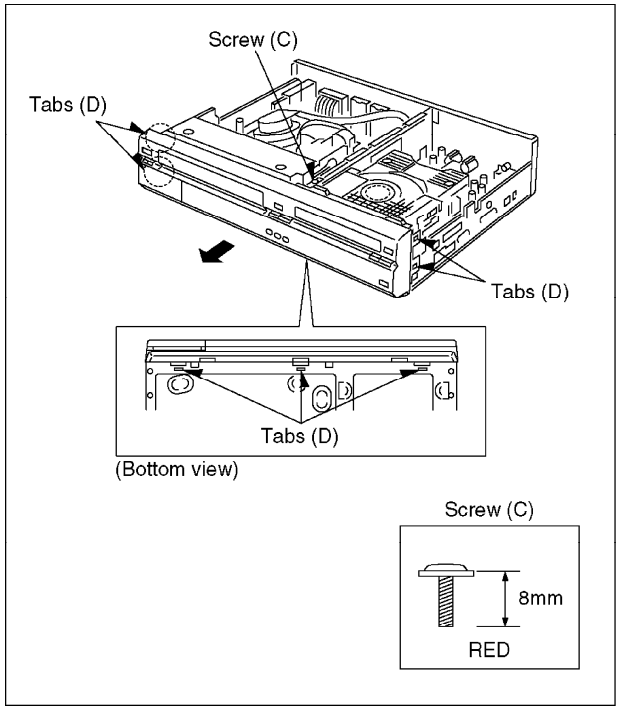
Fig. D1



2. REMOVAL OF THE FRONT PANEL UNIT

Remove	**Screw (C)**
Unlock	**7 Tabs (D)**

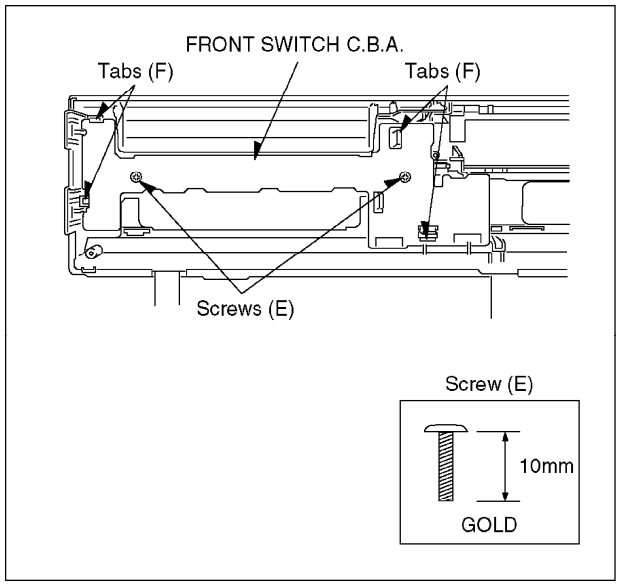
Fig. D2



3. REMOVAL OF THE FRONT SWITCH C.B.A.

Remove	**2 Screws (E)**
Unlock	**4 Tabs (F)**

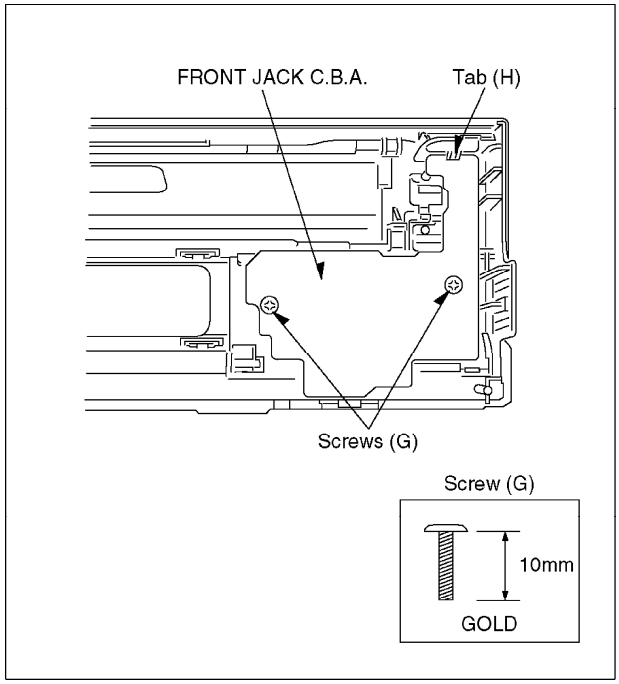
Fig. D3



4. REMOVAL OF THE FRONT JACK C.B.A.

Remove	**2 Screws (G)**
Unlock	**Tab (H)**

Fig. D4



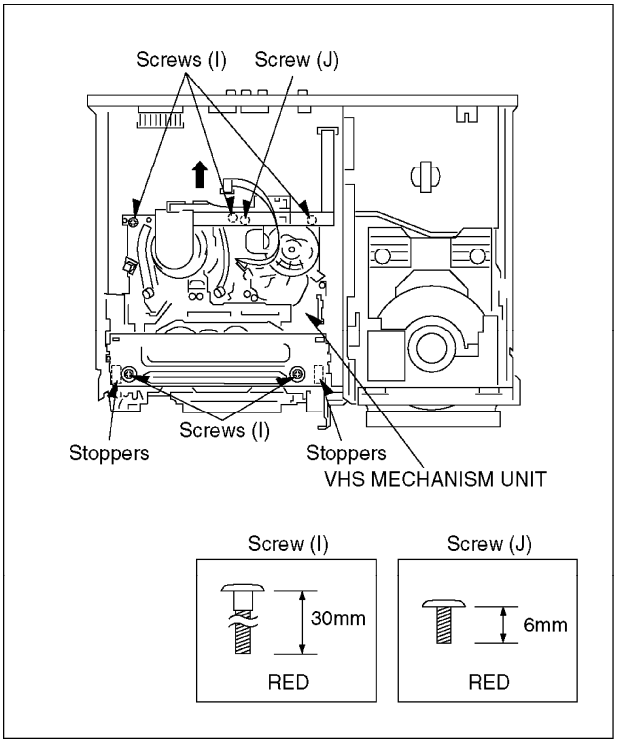
5. REMOVAL OF THE VHS MECHANISM UNIT

Remove	**5 Screws (I)**
Remove	**Screw (J)**

Note:

1. **Keep pressing 2 stoppers on Cassette Holder Plate and Press Cassette Holder Plate to the rear.**
2. **Remove the Mechanism Unit after bend the Cylinder Shield in the direction of the arrow.**

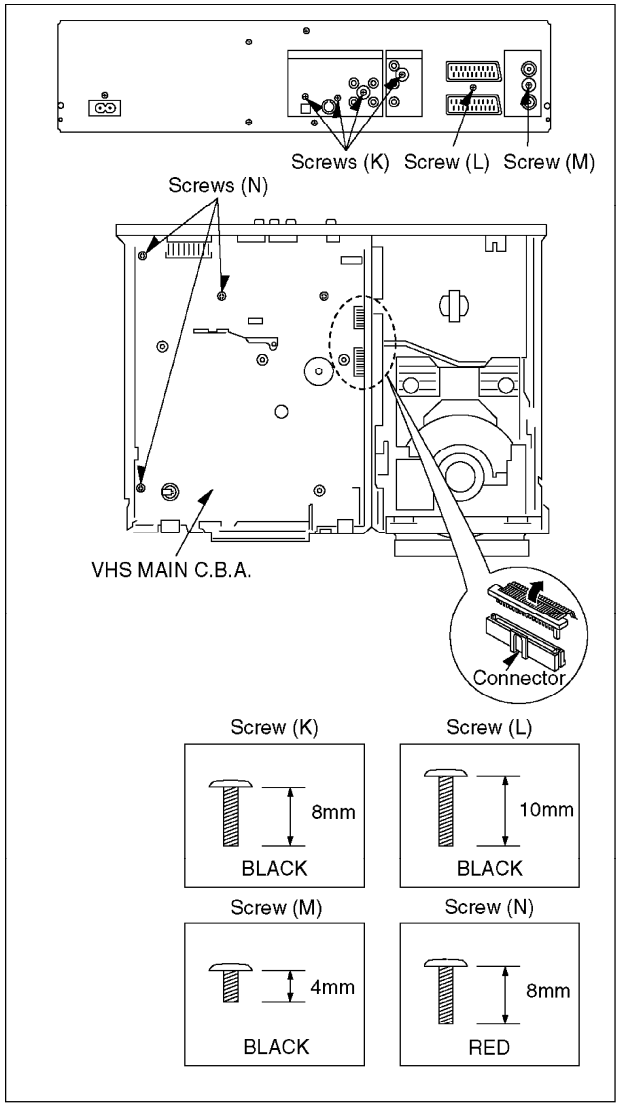
Fig. D5



6. REMOVAL OF THE VHS MAIN C.B.A.

Remove	**4 Screws (K)**
Remove	**Screw (L)**
Remove	**Screw (M)**
Remove	**3 Screws (N)**

Fig. D6

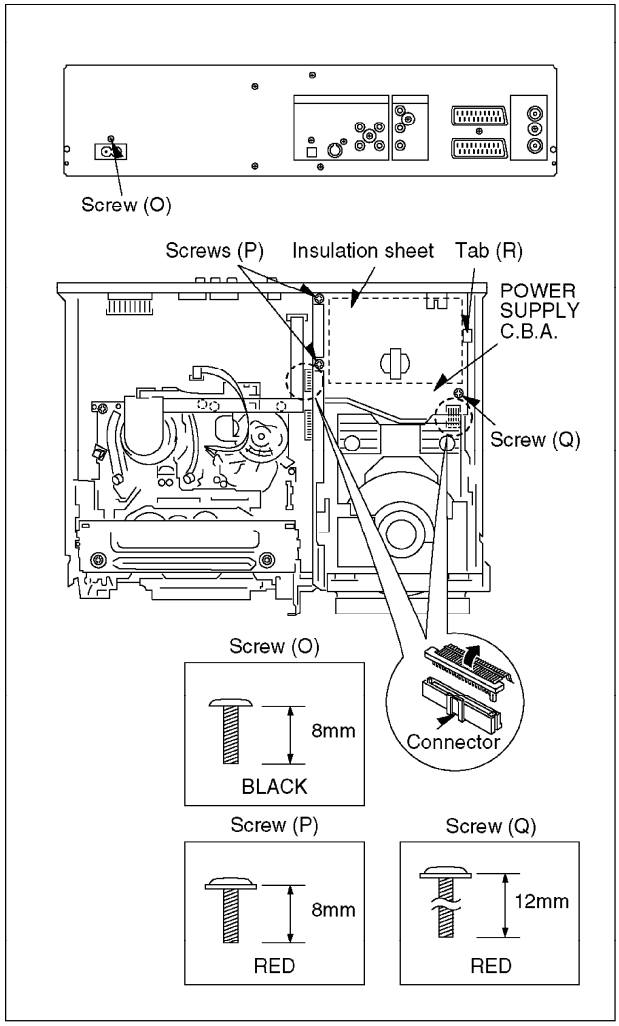


7. REMOVAL OF THE POWER SUPPLY C.B.A.

Remove	**Screw (O)**
Remove	**2 Screws (P)**
Remove	**Screw (Q)**
Unlock	**Tab (R)**

NOTE:
Before mounting the POWER SUPPLY C.B.A. onto the frame, be sure to confirm that the insulation sheet is mounted on the frame as shown in Fig. D7.

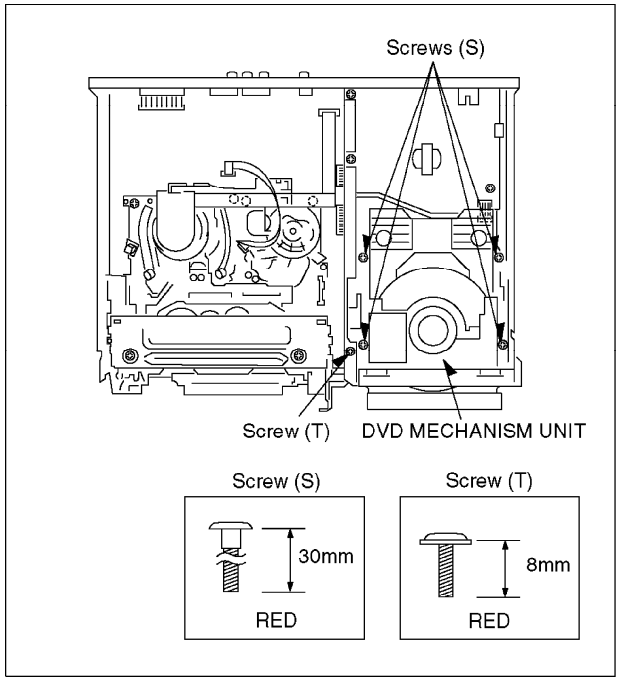
Fig. D7



8. REMOVAL OF THE DVD MECHANISM UNIT

Remove	**4 Screws (S)**
Remove	**Screw (T)**

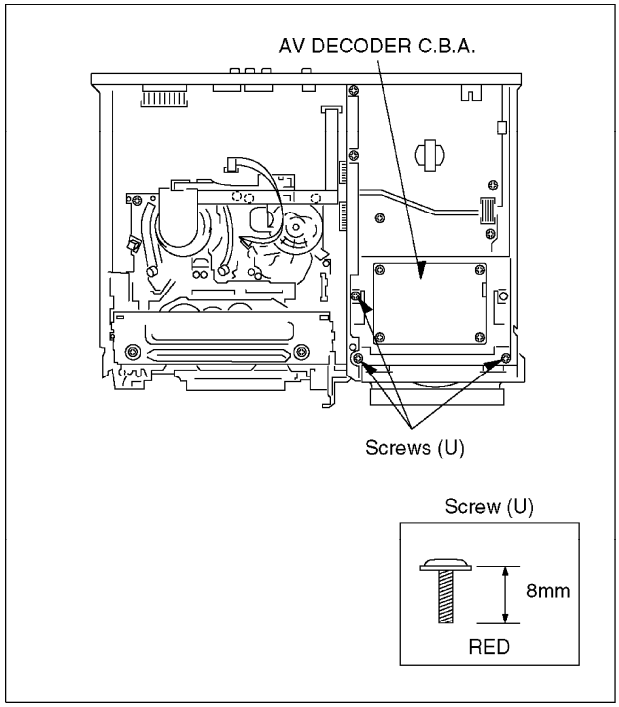
Fig. D8



9. REMOVAL OF THE AV DECODER C.B.A.

Remove	**3 Screws (U)**

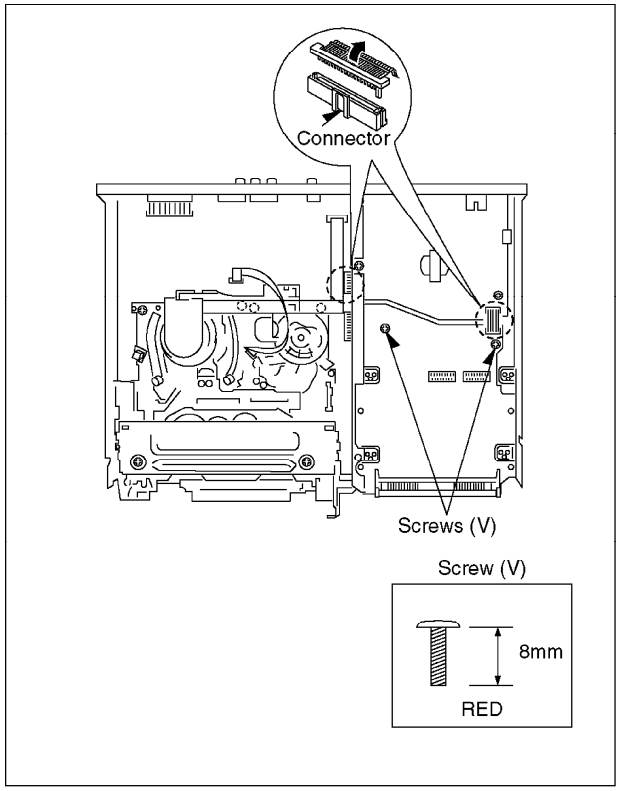
Fig. D9



10. REMOVAL OF THE DVD INTERFACE C.B.A.

Remove	**2 Screws (V)**

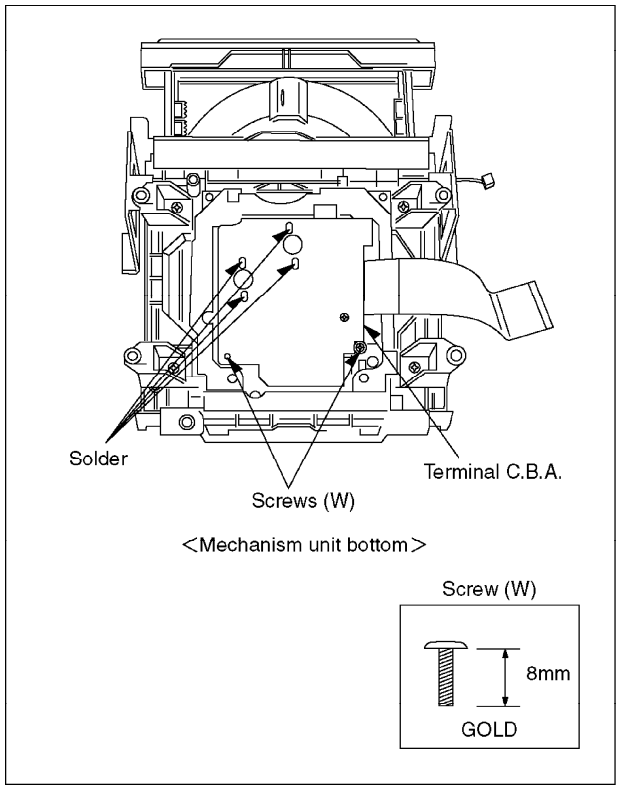
Fig. D10



11. REMOVAL OF THE TERMINAL C.B.A.

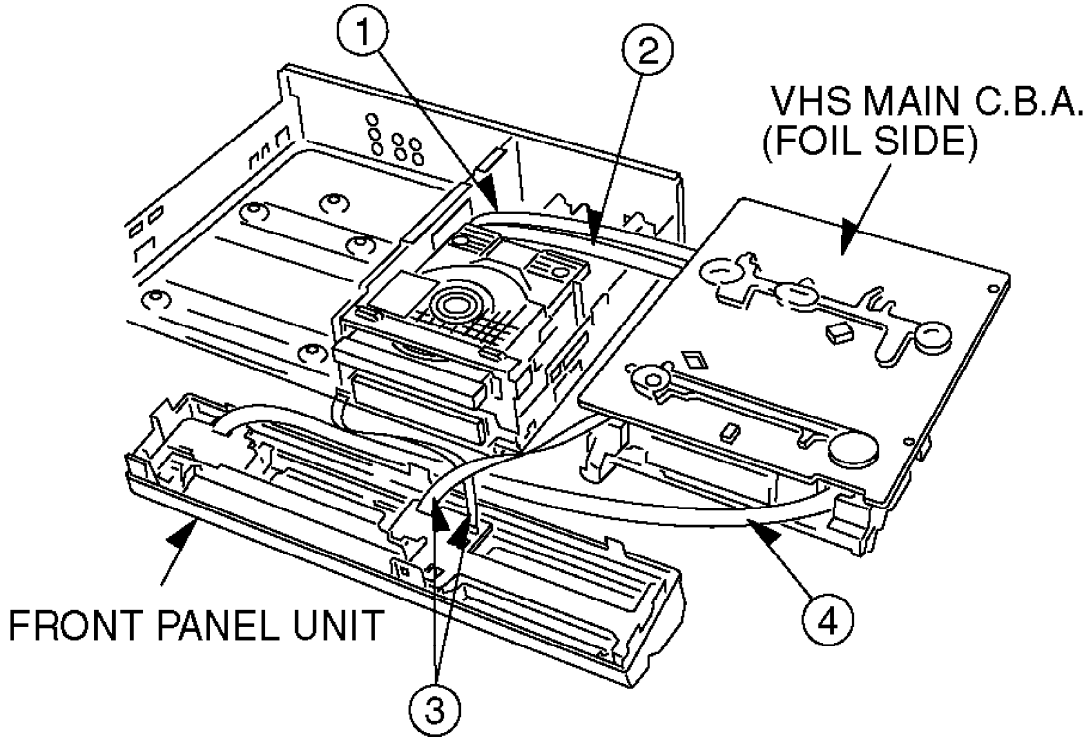
Remove	**Screws (W)**
Unsolder	**Solder**

Fig. D11

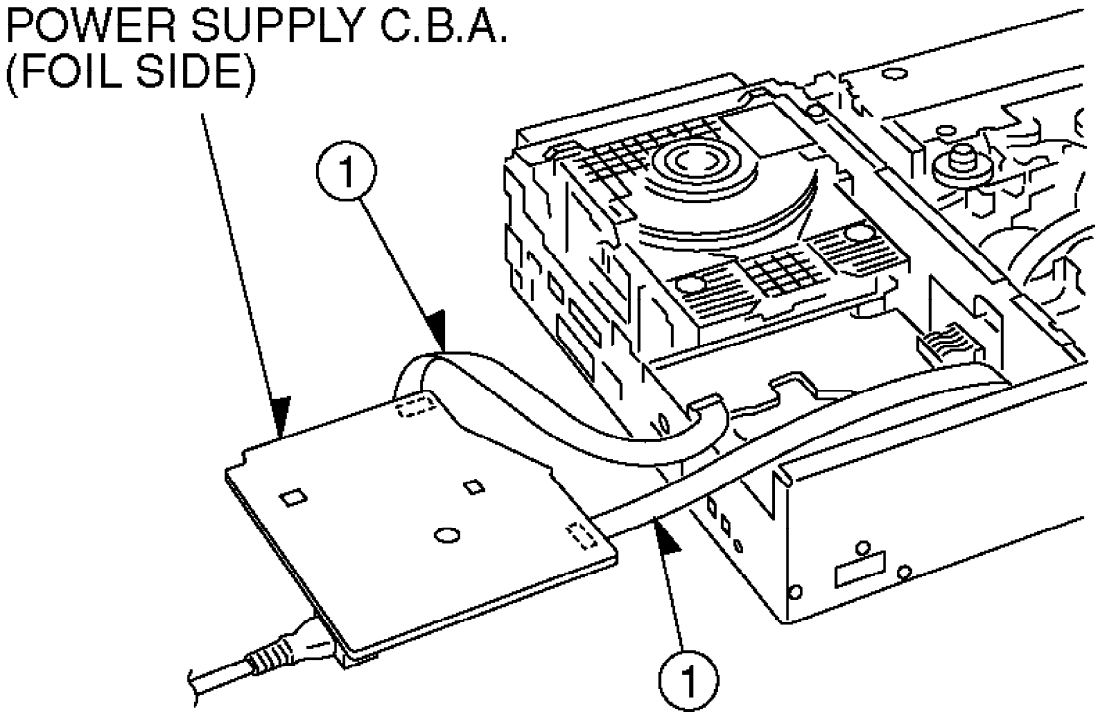


6.4. SERVICE POSITION

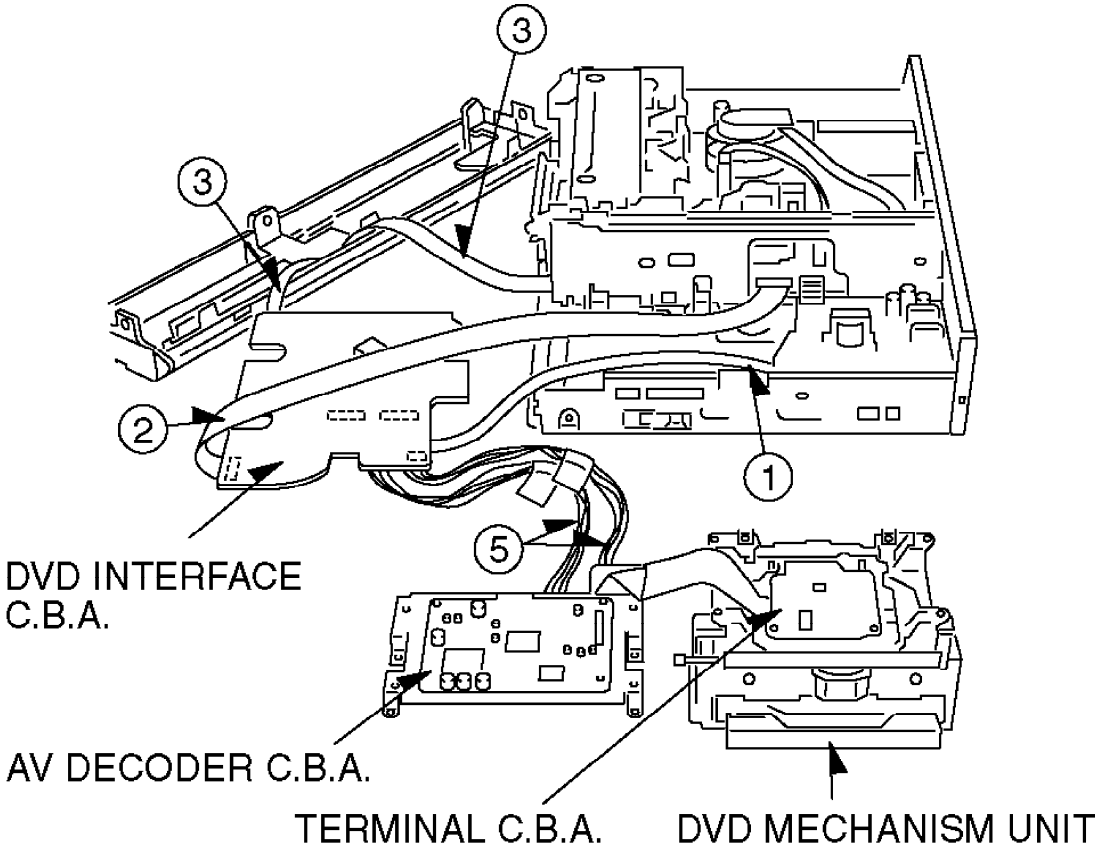
6.4.1. SERVICE POSITION OF THE VHS MAIN C.B.A.



6.4.2. SERVICE POSITION OF THE POWER SUPPLY C.B.A.



6.4.3. SERVICE POSITION OF THE DVD INTERFACE C.B.A., AV DECODER C.B.A. AND TERMINAL C.B.A.



6.4.4. LIST OF THE EXTENTION CABLES

①	VFK1730	11pins	P1001(VHS Main C.B.A.)—P1102(Power Supply C.B.A.)
①	VFK1730	11pins	P30001(DVD Interface C.B.A.)—P1103(Power Supply C.B.A.)
②	VFK1728	19pins	P4301(VHS Main C.B.A.)—P30002(DVD Interface C.B.A.)
③	VFK1732	6pins	PS7501(VHS Main C.B.A.)—PP7551(Front Switch C.B.A.)
③	VFK1732	6pins	PS31005(DVD Interface C.B.A.)—PP7552(Front Switch C.B.A.)
④	VFK1731	10pins	PS7502(VHS Main C.B.A.)—PP4801(Front Jack C.B.A.)
⑤	JGS0116	22pins	P30003(DVD Interface C.B.A.)—P37003(AV Decoder C.B.A.)
⑤	JGS0116	22pins	P30004(DVD Interface C.B.A.)—P37004(AV Decoder C.B.A.)

7. PREVENTION OF STATIC ELECTRICITY DISCHARGE

The laser diode in the traverse unit (optical pickup) may brake down due to static electricity of clothes or human body. Use due caution to electrostatic breakdown when servicing and handling the laser diode.

7.1. Grounding for electrostatic breakdown prevention

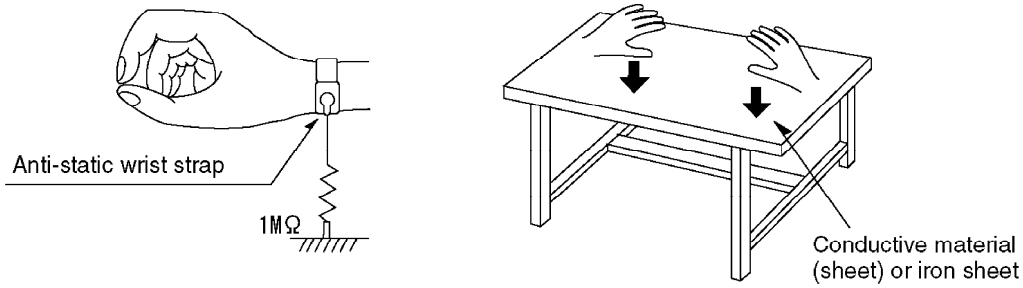
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

7.1.1. Worktable grounding

1. Put a conductive material (sheet) or iron sheet on the area where the optical pickup is placed, and ground the sheet.

7.1.2. Human body grounding

1. Use the anti-static wrist strap to discharge the static electricity form your body.



7.1.3. Handling of optical pickup

1. To keep the good quality of the optical pickup maintenance parts during transportation and before installation, the both ends of the laser diode are short-circuited. After replacing the parts with new ones, remove the short circuit accordingto the correct procedure. (See this Technical Guide.)
2. Do not use a tester to check the laser diode for the optical pickup. Failure to do so will damage the laser diode due to the power supply in the tester.

7.2. Handling Precautions for Traverse Unit (Optical Pickup)

1. Do not give a considerable shock to the traverse unit (optical pickup) as it has an extremely high-precise structure.
2. When replacing the optical pickup, install the flexible cable and cut its short land with a nipper. See the optical pickup replacement procedure in this Technical Guide. Before replacing the traverse unit, remove the short pin for preventingstatic electricity and install a new unit. Connect the connector as short times as possible.
3. The flexible cable may be cut off if an excessive force is applied to it. Use caution when handling the cable.
4. The half-fixed resistor for laser power adjustment cannot be adjusted. Do not turn the resistor.

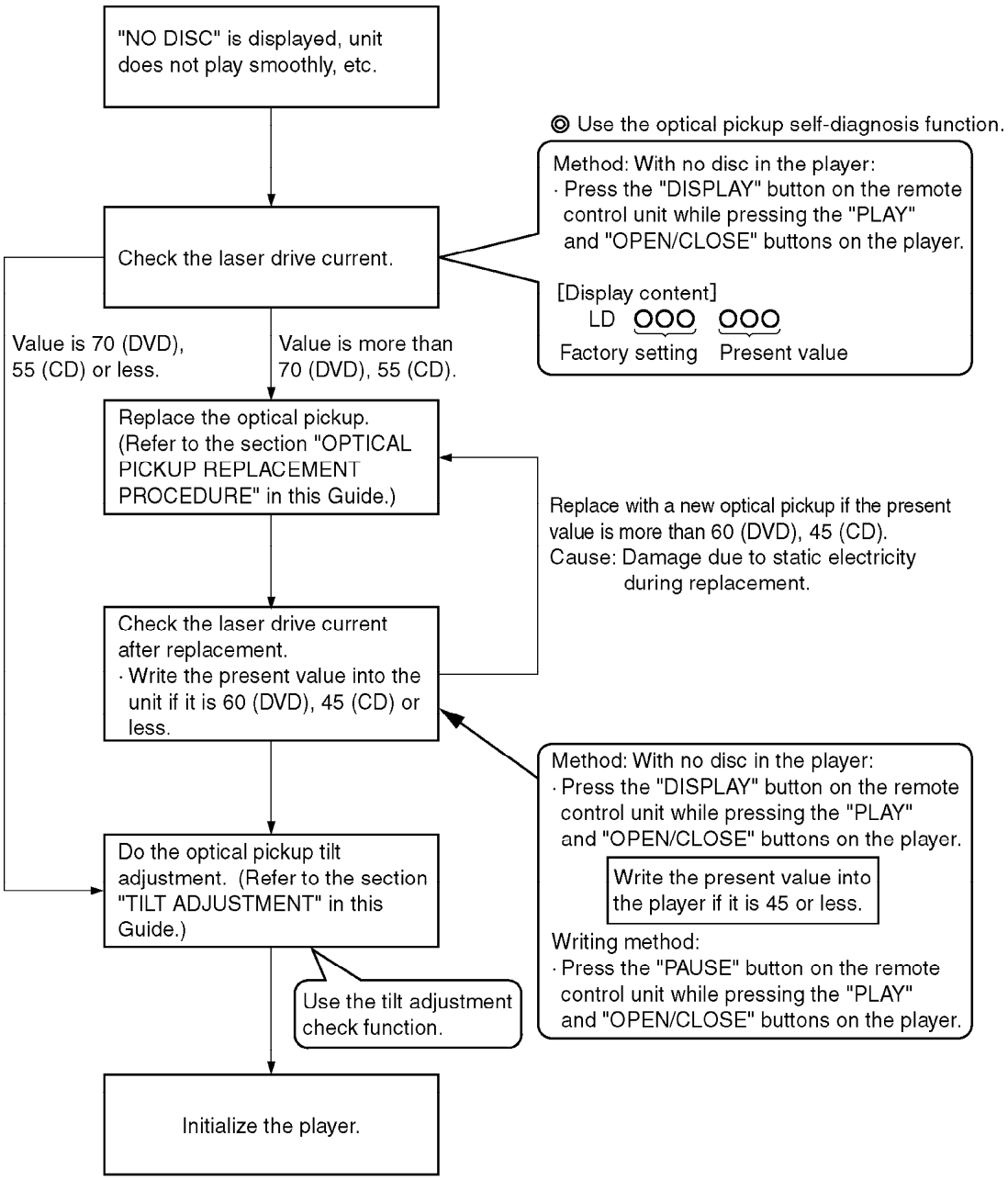
8. OPTICAL PICKUP SELF-DIAGNOSIS AND

REPLACEMENT PROCEDURE

8.1. Self-diagnosis

The optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective Self-diagnosis and tilt adjustment.Be sure to use the self-diagnosis functionbefore replacing the optical pickup when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than 55.

Note:
Press the power button to turn on the power, and check the value within three minutes before the unit warms up. (Otherwise, the result will be incorrect.)


"NO DISC" is displayed, unit does not play smoothly, etc.
◎ Use the optical pickup self-diagnosis function.
Method: With no disc in the player:
· Press the "DISPLAY" button on the remote control unit while pressing the "PLAY" and "OPEN/CLOSE" buttons on the player.
[Display content]
LD OOO OOO
Factory setting Present value
Check the laser drive current.
Value is 70 (DVD), 55 (CD) or less.
Value is more than 70 (DVD), 55 (CD).
Replace the optical pickup. (Refer to the section "OPTICAL PICKUP REPLACEMENT PROCEDURE" in this Guide.)
Replace with a new optical pickup if the present value is more than 60 (DVD), 45 (CD).
Cause: Damage due to static electricity during replacement.
Check the laser drive current after replacement.
· Write the present value into the unit if it is 60 (DVD), 45 (CD) or less.
Method: With no disc in the player:
· Press the "DISPLAY" button on the remote control unit while pressing the "PLAY" and "OPEN/CLOSE" buttons on the player.
Write the present value into the player if it is 45 or less.
Writing method:
· Press the "PAUSE" button on the remote control unit while pressing the "PLAY" and "OPEN/CLOSE" buttons on the player.
Do the optical pickup tilt adjustment. (Refer to the section "TILT ADJUSTMENT" in this Guide.)
Use the tilt adjustment check function.
Initialize the player.

8.2. Cautions to Be Used Before Replacing the Optical Pickup Unit and

Spindle Motor Assembly

Before replacing the optical pickup unit and spindle motor assembly, check the total using hours for each of them. The checking method is as follows:

	Operating state & Key operation	Display
Using hours of CD laser	Press "PLAY" and "FWD-SKIP" buttons on the player and "5" on the remote controller in this order simultaneously while the unit is stopped	T1_xxxx_yyyy yyyy: total hours are displayed by 4-digit figures (unit: 10 hours).
Using hours of DVD laser	Press "PLAY" and "FWD-SKIP" buttons on the player and "5" on the remote controller in this order simultaneously while the unit is stopped	T1_xxxx_yyyy yyyy: total hours are displayed by 4-digit figures (unit: 10 hours).
Using hours of SP motor	Press "PLAY" and "FWD-SKIP" buttons on the player and "6" on the remote controller in this order simultaneously while the unit is stopped	T2_xxxx xxxx: total hours are displayed by 4-digit figures (unit: 10 hours).
Resetting using hours of CD and DVD lasers (Simultaneous resetting)	Press "STOP", FWD-SKIP" buttons on the player and "6" on the remote controller in this order simultaneously while the unit is stopped	T1_0000_0000
Resetting using hours of the motor	Press "STOP", FWD-SKIP" buttons on the player and "6" on the remote controller in this order simultaneously while the unit is stopped	T2_0000

Cautions to be taken when replacing the optical pickup
The optical pickup may break down due to the static electricity of human body. Take proper protection measures against static electricity before repairing the parts around the optical pickup. (See the page describing the PREVENTION OF STATIC ELECTRICITYDISCHARGE.)

1. Do not touch the areas around the laser diode and actuator.

2. Do not judge the laser diode with a tester. (The tester will be damaged easily.)

3. It is recommended to use a destaticized soldering iron for short-circuiting or removing the laser diode. (Recommended soldering iron) HAKKO ESD Product

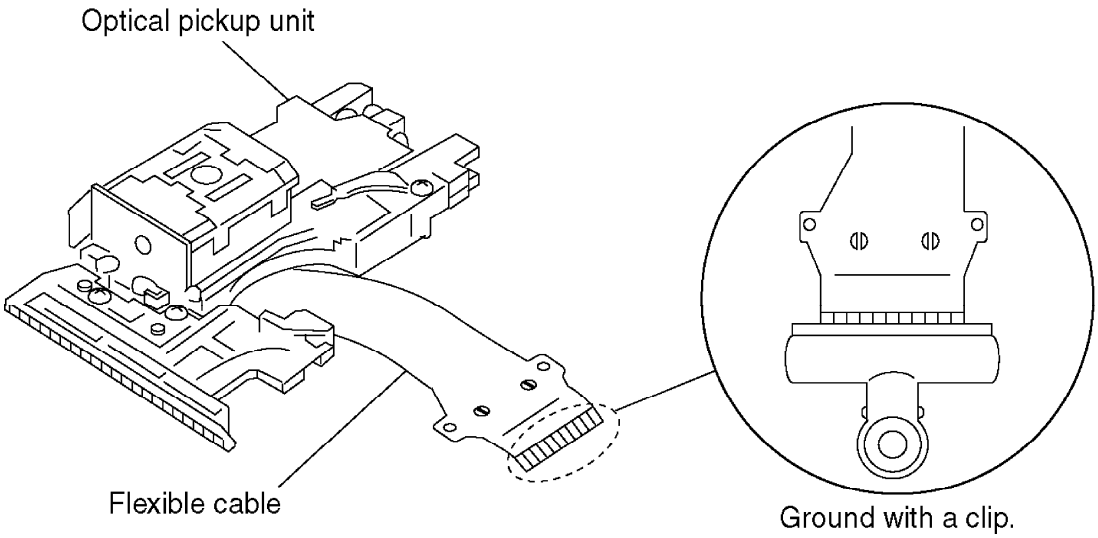
4. Solder the land of the flexible cable in the optical pickup.

Note:

- When using a soldering iron which is not destaticized, short-circuit the terminal face of the flexible case with a clip. After that, short-circuit the land.

- After the repairing work is completed, remove the solder according to

the correct procedure shown in this Technical Guide.



8.3. DVD Self-diagnosis Function and Service Modes

Improving the self-diagnosis function
The self-diagnosis funciton in our DVD player currently in use is improved as follows:

Our DVD player currently in use	Our new DVD	
UHF error display The latest error storage function n=1	UHF error display The latest error storage n=20	The storage capacity is incraesed.
Jitter/read error display	Jitter/read error display Focus drive value display	The focus drive current value can be displayed.
Laser drive current display For DVD	Laser drive current display For DVD/CD	
	ADSC internal RAM data display	The servo learning value stored in the RAM data inside the ADSC (servo controller) IC is displayed.
	Servo process display	Mainly in the initial starting operation period of the player, a number is allotted to the servo process of each step, and the process of the starting operation can be displayed.
	Total operation time display SP motor Laser (DVD/CD)	The operation times of SP motor and the laser (both for the DVD and CD) can be displayed.

8.4. DVD Service mode table 1

Set the VCR/ DVD/ TV Select Switch to DVD position, and pressing various button combinations on the player and remote control unit can activate the service modes.

Item	Player mode and button combination	Function	Display	Cancellation method
Jitter check	In PLAY mode, press PLAY and OPEN buttons on the player, and "5" button on the remote control unit simultaneously.	Jitter check Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more.	J _xxx_yyy_zz Focus drive value Read error counter Jitter rate Jitter check mode Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation.	Press STOP button.
Error code check	In ** mode, press PLAY and OPEN buttons on the player, and "0" button on the remote control unit simultaneously. * With pointing of cursor up and down on display, the panel controller switches serial number of history and sends out the command accordingly.	Error code check The latest error code stored in EEPROM is displayed.	Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: -> nn UXX Error code = 0 x DBXX is expressed: -> nn HXX Error code = 0 x DXXX is expressed: -> nn FXXX Error code = 0 x 0000 is expressed: -> nn F--- * "nn" denotes the serial number of history.	Cancelled automatically 5 seconds later.
Initial setting of laser drive current	In STOP mode, press PLAY and OPEN buttons on the player, and PAUSE button on the remote control unit simultaneously.	Initial setting of laser drive currentInitial current value for each of DVD laser and CD laser is separately saved in EEPROM.	LDO_034_028 CD laser current measurement DVD laser current measurement Laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 34mA and 28mA for DVD laser and CD laser respectively when the laser is witched on.	Cancelled automatically 5 seconds later.
DVD laser drive current measurement	In STOP mode, press PLAY and OPEN buttons on the player, and DISPLAY button on the remote control unit.	DVD laser drive current measurement ·DVD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when the primary power is switched off.)	LDD_034_032 Measured current Initial current stored in EEPROM DVD laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 34mA and the measured value is 32mA.	Cancelled automatically 5 seconds later.
ADSC internal RAM data check	In ** mode, press PLAY and OPEN buttons on the player, and RETURN button on the remote control unit simultaneously.	ADSC internal RAM data check ·ADSC internal RAM data is read out and displayed. Change the address with CLEAR key operation to show the data for 11 addresses.	A_DFA_6901 RAM data for specified address Address ADSC internal RAM data check mode The value is shown in hexadecimal notation. The above example shows the data in ADSC address DFAh is 6901h.	Press STOP button.
Servo process display	In STOP mode, press PLAY and FWD-SKIP buttons on the player, and "7" button on the remote control unit simultaneously.	Servo process display The servo process from STOP to ACCESS is displayed.	———	Press STOP button.
CD laser drive current measurement	In STOP mode, press PLAY and FWD-SKIP buttons on the player, and DISPLAY button on the remote control unit simultaneously.	CD laser drive current measurement CD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when the primary power is switched off.)	LDC_028_026 Measured current Initial current stored in EEPROM CD laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 28mA and the measured value is 26mA.	———

Item	Player mode and button combination	Function	Display	Cancellation method
Version display	In STOP mode, press PLAY and OPEN buttons on the player, and "7" button on the remote control unit simultaneously.	Version display	srrr_xyzzz System controller release number System controller model number System controller generation Panel controller release number Panel controller model number	Cancelled automatically 5 seconds later.
Lighting of display tube	In ** mode, press PLAY and OPEN buttons on the player, and "9" button on the remote control unit simultaneously.	Lighitng of display tube	———	Turn off the power.
Dealer's lock	In STOP mode, press STOP button on the player, and POWER button on the remote control unit simultaneously.	Dealer's lock The lock is switched ON or OFF. When dealer's lock is ON, it prohibits switching off of the secondary power and tray opening. When the lock is switched, its ON/OFF status is stored in EEPROM.	• "LOCKED" sign appears when dealer's lock is switched on, or when secondary power key or tray opening key is pressed while the lock is on. • "UNLOCKED" sign appears when dealer's lock is swiched off.	Repeat the same operation.
Initialization	In STOP mode, press PLAY, FWD-SKIP and OPEN buttons on the player simultaneously for 3 seconds or longer.	Initialization User settings are cancelled and player is initialized to factory setting.	"INITIALIZED"	
Region display	In STOP mode, press PLAY and PLAY buttons on the player, and "6" button on the remote control unit simultaneously.	Region display	2_6_A0_085 Version number Fixed value to distinguish between Japan/Europe DVD generation number Region No.	Cancelled automatically 5 seconds later.

Item	Player mode and button combination	Function	Display	Cancellation method
Timer 1 check	In STOP (no disc) mode, PLAY and FWD-SKIP buttons on the player, and "5" button on the remote control unit simultaneously.	Timer 1 check Laser operation timer Operation time is measured separately for DVD laser and CD laser.	T1_1234_5678 Shown to the left DVD laser time, and to the right CD laser time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	Cancelled automatically 5 seconds later.
Timer 1 reset	While displaying Timer 1 data, press STOP and FWD-SKIP buttons on the player, and "5" button on the remote control unit simultaneously.	Timer 1 reset Laser operation timer Operation time of both DVD laser and CD laser is reset all at once.	T1_0000_0000	Cancelled automatically 5 seconds later.
Timer 2 check	In STOP mode, press PLAY and FWD-SKIP buttons on the player, and "6" button on the remote control unit simultaneously.	Timer 2 check Spindle motor operation timer	T2_1234 Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	Cancelled automatically 5 seconds later.
Timer 2 reset	While displaying Timer 2 data, press STOP and FWD-SKIP buttons on the player and "6" button on the remote control unit simultaneously.	Timer 2 reset Spindle motor operation timer	T2_0000	Cancelled automatically 5 seconds later.

8.5. DVD Service Mode Table 2

The service modes can be activated by pressing various button combination on the player and remote control unit.

Note:

Set the VCR/DVD/TV select switch to DVD position.

Player buttons	Remote control unit buttons	Application	Note
PLAY / + / OPEN/CLOSE	0	Displaying the UHF display F_ _ _	Refer to sectio 8.6. Self-Diagnosis Function (UHF Display).
	5	Jitter check, tilt adjustment *Display shows J_xxx_yyy_zz "yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focusdrive value. Refer to section 10.4. for Optical Pickup Tilt Adjustment Procedure.	Refer to sectio 10.4. Optical Pickup Tilt Adjustment
	6	Checking the region numbers and broadcast system	
	7	Checking the program version	Check the IC37 FLASH ROM program.
	9	Lighting Confirmation Function of Display Tube	
	DISPLAY	Checking the laser drive current	Refer to sectio 9.7 Optical Pic Replacement Procedure.
	PAUSE	Writing the laser drive current value after replacing the optical pickup (do not use for anything other than optical pickup replacement)	
PLAY / SKIP/ SEARCH<< / OPEN/CLOSE		Initializing the DVD player (restoring factory preset settings) *Use when replacing a microprocessor, microprocessor peripheral, or C.B.A.	

8.6. DVD Self Diagnostic Function-Error Code

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3	Defec
	U, H error					
U11	Focus error					
H01	Tray loading error					
H02	Spindle servo error	(Spindle servo, DSC SP motor, CLV servo error)				
H03	Traverse servo error					
H04	Tracking servo error					
H05	Seek error					
H06	Power error	Cannot switch off the power because of the panel and system computer communication error				
	DSC related					
F489	Communication error between Front u-com and Main u-com.	No communication between Front u-com and Main u-com after power on (after message “WELCOME TO DVD WORLD”).	IIC communication	Flash-ROM (IC37001)	Firmware in Flash-ROM (IC37001)	
F499	No response from Main u-com.	No response from Main u-com after Front u-com send for example “key code” to Main u-com.	Mian u-com (IC36001)			
F500	DSC error	DSC stops in the occurence of servo error (starup, focus error, etc)	OPU	ADSC (IC37004)	FEP (IC5201)	serv driv (IC370
F501	DSC not Ready	DSC-system computer communication error (Communication failure caused by idling of DSC)	ADSC (IC37004)	CPU (IC36001)		
F502	DSC Time out error	Similar disposal as F500	OPU	ADSC (IC37004)	FEP (IC5201)	serv driv (IC370
F503	DSC communication Failure	Communication error (result error occured although communication command was sent)	ADSC (IC37004)	FEP (IC5201)	EEPROM (IC37002)	
F505	DSC Attention error	Similar disposal as F500	OPU	ADSC (IC37003)	FEP (IC5201)	serv driv (IC370
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc	DISC	FEP (IC5201)	ADSC (IC37004)	ODC (IC370
	ODC related					
F600	Access failure to management information caused by demodulation error	Operation stopped because navigation data is not accessible caused by the demodulation defect	ODC (IC37003)	FEP (IC5201)	ADSC (IC37004)	

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3	Defec
F601	Indeterminate sector ID requested	Operation stopped caused by the request to access abnormal ID data	ODC (IC37003)	FEP (IC5201)	ADSC (IC37004)	
F602	Access failure to LEAD-IN caused by demodulation error	LEAD IN data unreadable				
F603	Access failure to KEYDET caused by demodulation error	Access failure to CSS data of disc				
F610	ODC abnormality	No permission for command execution	ODC (IC37003)			
F611	6626 QCODE don't read Error	Access failure to seek address in CD series	ODC (IC37003)			
F612	No CRC OK for a specific time	Access failure to ID data in DVD series	ODC (IC37003)			
F630	No reply to KEY DET enquiry	(for internal use only)				
F631	CPPM KEY DET is not available till the FILE terminal	(CPPM file system is unreadable caused by scratches)	DISC	CPPM		
F632	CPPM KEY DET is not available	Been revoked or falsified	DISC	EEPROM (IC37002)	CPPM	
	Disc code					
F103	Illegal highlight Position	Big possibility of disc specification violation during highlight display	DISC			
	HIC Error					
F4FF	Force initialize failure (time out)		EEPROM (IC37002)	CPU (IC36001)	FEP (IC5201)	ADS (IC370
	Micro computer error					
F700	MBX overflow	When replying message to disc manager				
F701	Message command does not end	Next message is sent before replying to disc manager				
F702	Message command changes	Message is changed before it is sent as a reply to disc manager				
F880	Task number is not appropriate	Message coming from a non-existing task				

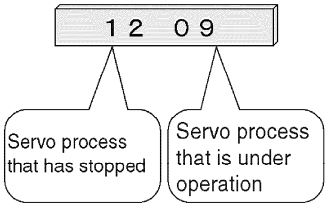
Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3	Defec
F890	Sending message when message is being sent to AV task	Sending message to AV task				
F891	Message couldn't be sent to AV task	Begin sending message to AV task				
F893	FROM falsification		FROM (IC37001)	CPU (IC36001)		
F894	EEPROM abnormality		EEPROM (IC37002)	Serial / communication on Ione		
F8A0	Message command is not appropriate	Begin sending message to AV task				

8.7. DVD Last Error Code saved during NO PLAY

Error code	Error Content	System computer	Setting task	System computer interna error code
F0BF	6) Cannot playback because physical layer is not recoginizable	PCND_NOPLAY PHYSICAL 0x50	DriveManager	0xDOBF
F0C0	8) DVD: Cannot playback because it is not DVD Video/Adio/VR	PCND_NOPLAY VIDEO 0x70	DiscManager	0xDOC0
F0C1	9) DVD: Prohibited by the restricted region code	PCND_NOPLAY RCD 0x80	DiscManager	0xDOC1
F0C2	A) DVD: PAL restricted playback	PCND_NOPLAY PAL 0x90	DiscManager	0xDOC2
F0C3	B) DVD: Parental lock setting prohibits the playback of the entire title	PCND_NOPLAY PTL 0xA0	DiscManager	0xDOC3
F0C4	C) VCD: Prohibited because it is in PHOTO CD fromat	PCND_NOPLAY PHOTO CD 0xB0	DiscManager	0xDOC4
F0C5	VCD/CD: Prohibited because it is CDROM without CD-DA	PCND_NOPLAY CDROM 0xC0	DiscManager	0xDOC5

8.8. Servo Process Flow

Specification of the servo process display in the starting flow



(Restrictions)
All processes that are under operati on cannot be displayed due to the limit of the processing time.

Starting flow	Range of the servo process numbers	Processing items	
		Number	Contents of each process
START			
Initial setting Tray control	00	00	Each initial setting
TRV initial movement	01	01	TRV initial movement
Disc detection	02～08	02	Initial setting in FE system
		05	Detecting LD ON HALF
		08	Detecting CD LD ON
Disc type distinction	02～08	02	Initial setting in FE system
Focus servo	10～13	12	Focus ON
		13	FBAL adjustment
Tracking servo	14～15	15	Tracking ON
Gain learning	17	17	Gain adjustment in ADSC focus system
ID read	18～1A	19	DBAL/equalizer adjustment
		1A	ID read

8.9. DVD Servo Process Display Mode

In starting operation of the player, a number is allotted to each servo process so that the operation of each step can be seen. The relation between the process and the displayed number are as follows:

Number allotment to the servo process

Process classification	Each processing item	Description	Process number
Initial start process	Initial start	The process starts after the tray is loaded. (The state is changed to "READY" or PREPARE".)	0～40
	Secondary learning	Servos for the DVD-DL 1st layer and the CD-DA double speed are learned in this step.	50～7F
Restart process	Restart	When a user operates in the "READY" state, each servo is turned on.	80～9F
Seek process	Seek	The optical pickup is moved to the disc destination in this process.	A0～BF
Repair process	Recover		
	(Error check)	An error is searched in the PLAY/SEEK state.	C1～C3
	(Attention)	An error is recovered following the attention error interrupt from the S-ODC.	C4～C6
	(Q code read)	If any Q code is improperly read, reset and retry.	C7～C9
Stop process	Stop	A servo is controlled in response to the user's operation to stop the disc completely.	F0～FF

8.10. DVD Sales demonstration lock function

This function prevents discs from being lost when the unit is used for sales demonstrations by disabling the disc eject function. "LOCKED" is displayed on the unit, and ordinary operation is disabled.

8.10.1. Setting

The sales demonstration lock is set by simultaneously pressing STOP button on the player and

POWER button on the remote control unit.

8.10.2. Cancellation

The lock can be cancelled by the same procedure as used in setting. ("UNLOCKED" is displayed on cancellation. Disconnecting the power cable from power outlet does not cancel the lock.)

8.11. DVD Handling After Completing Repairs

Use the following procedure after completing repairs.

8.11.1. Method

Confirm that the power is turned on:

1. Press the "OPEN/CLOSE" button to close the tray.

2. Press the "POWER" button to turn off the power.

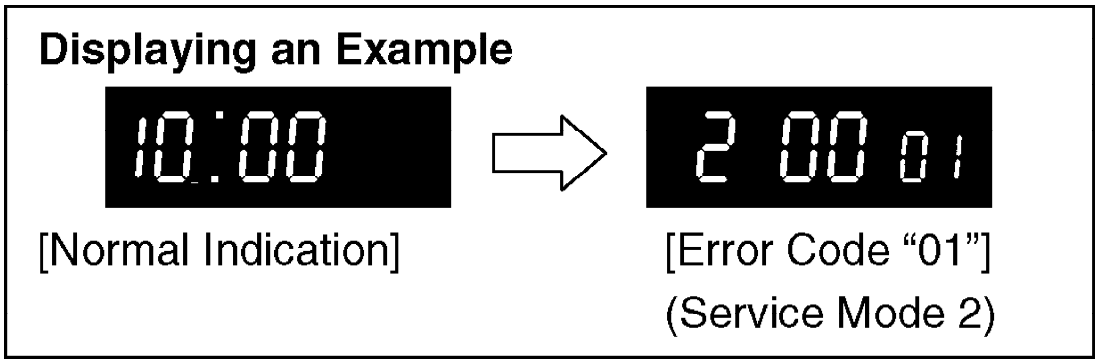
3. Disconnect the power plug from the outlet.

8.11.2. Precautions

Do not disconnect the power plug from the outlet with the tray still open, then close the tray manually.

8.12. VCR Self-Diagnosis Result Display

The "SELF-DIAGNOSIS RESULT DISPLAY & MEMORY function is built in this VTR.
It means that when the VCR detects undesirable condition, it can be displayed a “Error code (Two numbers from the right)” with Service Mode 2.
Since the "Error code" is stored in the EEPROM, it can be displayed although after disconnected the AC leads. It can be displayed with Service Mode 2.
(If a second error had been detected, only the most recent error is displayed.)
For more details, refer to the Service Manual for Z-Mechanism Chassis Order number VRD9802005C2.



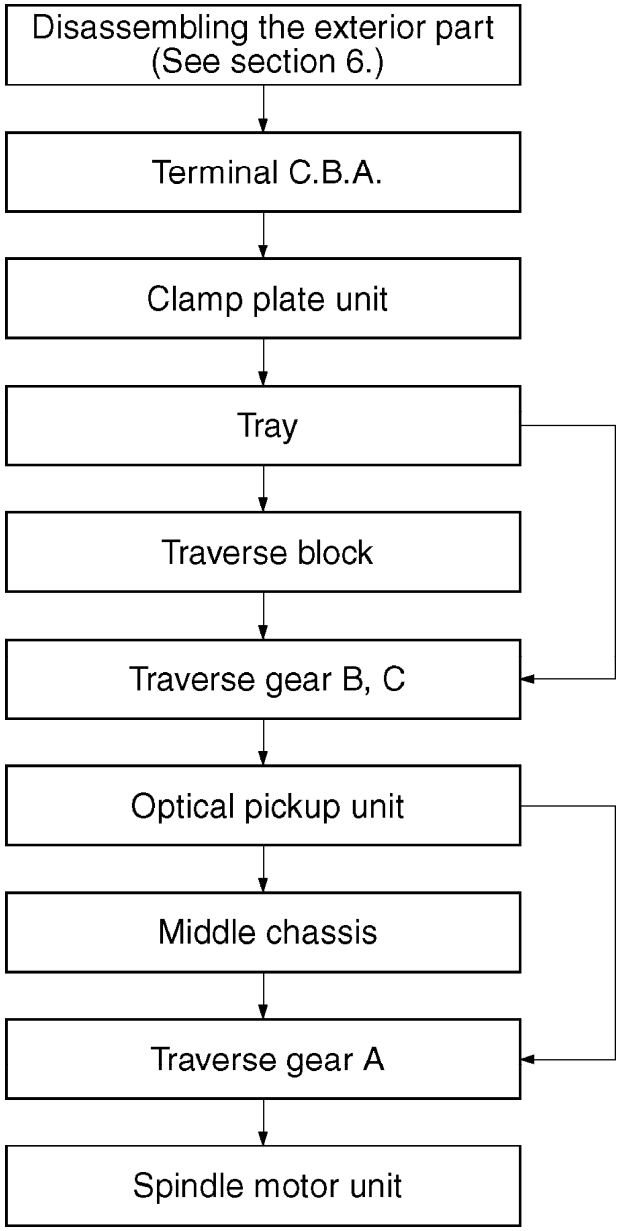
Note:
Set the VCR/ DVD/ TV Select Switch on the Remote Controller to VCR position.

INDICATION	CAUSE	REMEDY/CHECK
01	After cylinder lock is detected, the cylinder does not start rotating again even after tape unloading.	Check the cylinder motor drive circuit.
02	Cassette tape is not wound up during the tape unloading except EJECT mode.	Check the capstan motor drive circuit.
03	Mechanism locks during mode transition except EJECT mode.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment. 3. Check the mode switch.
04	Mechanism locks during tape unloading.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment.
06	Mechanism locks after tape unloading in EJECT mode.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment for cassette holde
07	During recording mode, recording signal is less than the normal condition.	Protection of the over-current flowing in transistor which produces the power supp for recording mode.
08	Recording circuit works except recording mode.	Check the recording circuit.
16	Cylinder lock detection.	Check the cylinder unit and the cylinder m drive circuit.
17	Supply reel mechanism lock detection	Check the supply reel mechanism and the supply reel circuit.
18	Take-up reel mechanism lock detection	Check the Take-up reel mechanism and th Take-up reel circuit.
2*	PG shifter automatic adjustment error.	Check the servo/system control circuit and the cylinder unit.

Fig. T1 Self-Test indication Display

9. ASSEMBLING AND DISASSEMBLING THE MECHANISM UNIT

9.1. DVD Disassembly Procedure

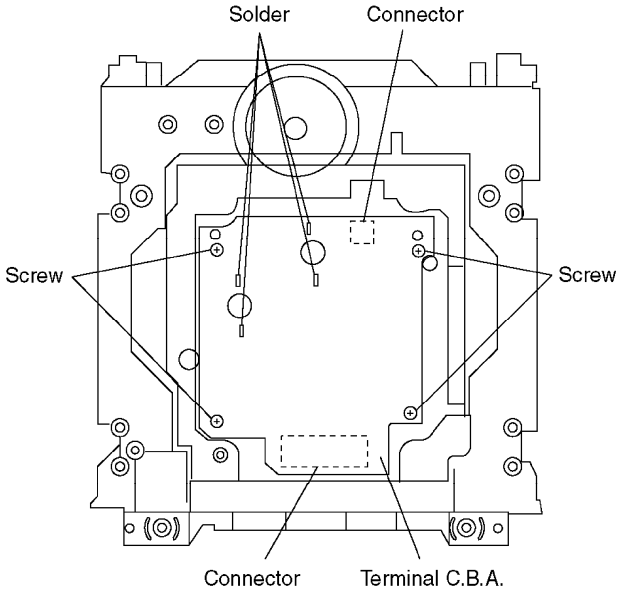


9.2. Terminal C.B.A.

1. Unscrew the screws.

2. Remove the solders.

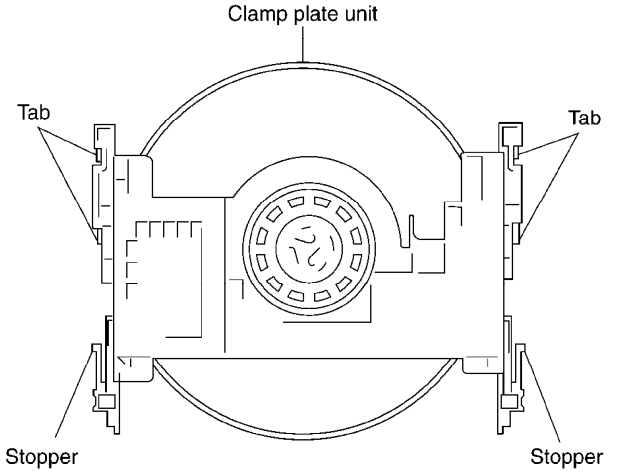
3. Remove the connectors.

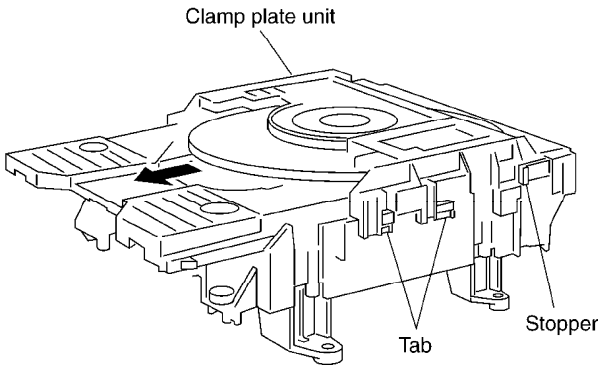


<Mechanism unit bottom>

9.3. Clamp Plate Unit

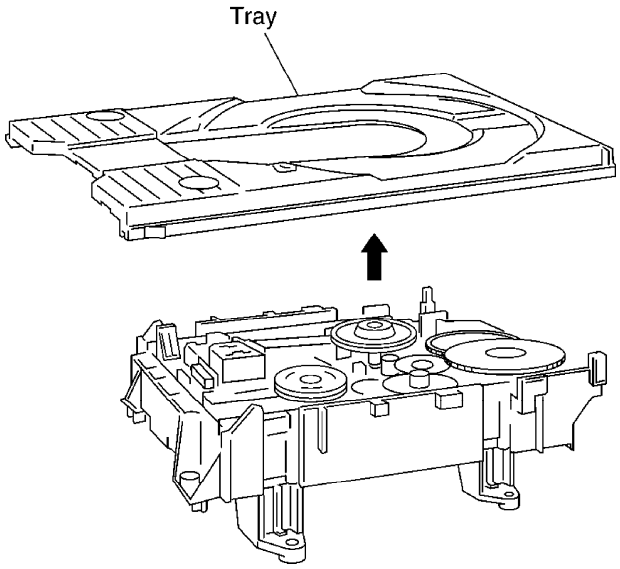
1. Spread the stopper with hand to slide the tabs and remove the clamp plate unit.





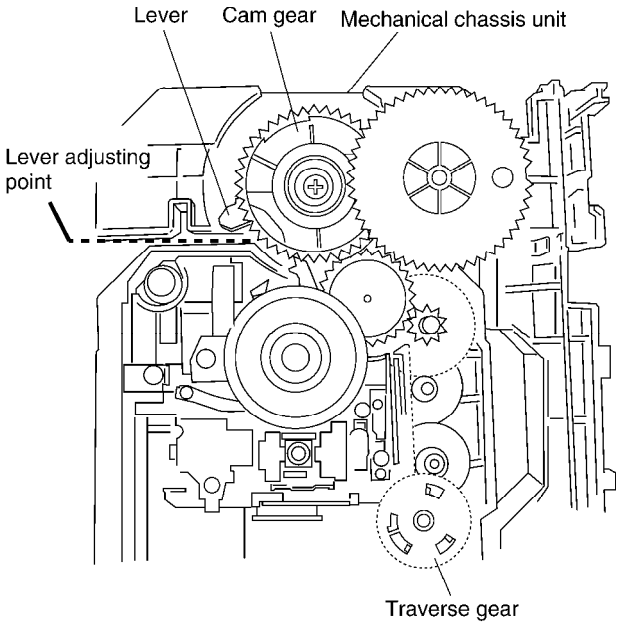
9.4. Tray

1. Lift the tray.



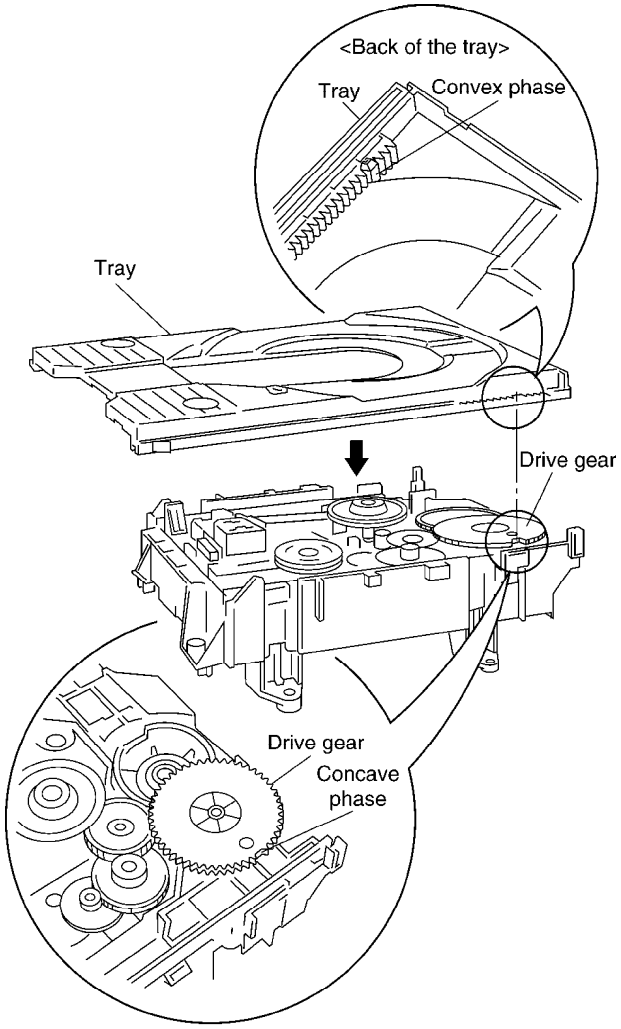
● **Reassemble the tray so that it is in the backmost position.**

1. Turn traverse gear until cam gear leaver comes to the lever adjusting position at the end of mechanical chassis unit.



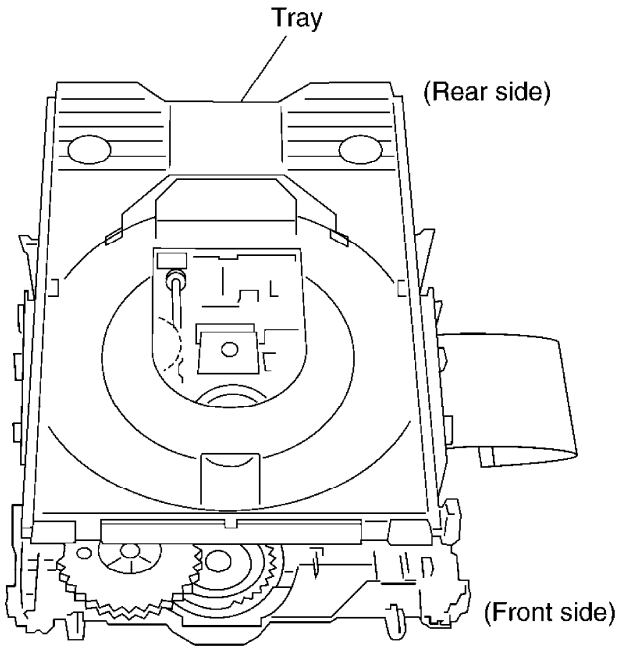
<Figure 1>

2. Check the position of convex phase on back of the tray, and that of concave phase on drive gear.



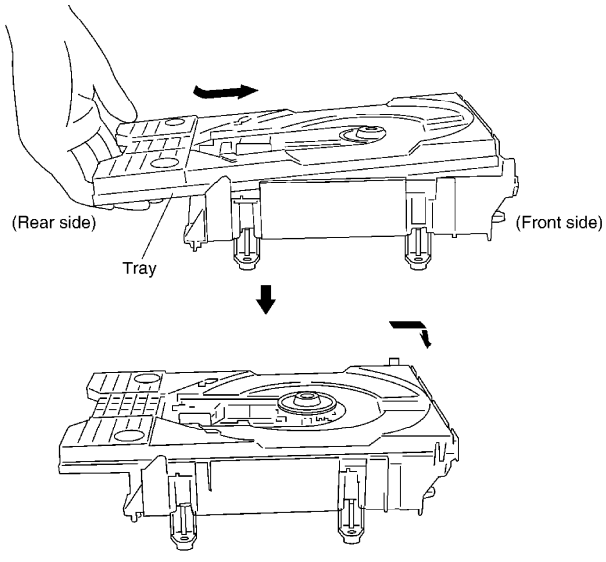
<Figure 2>

A. Place the tray on the unit from rearward.



<Figure 3>

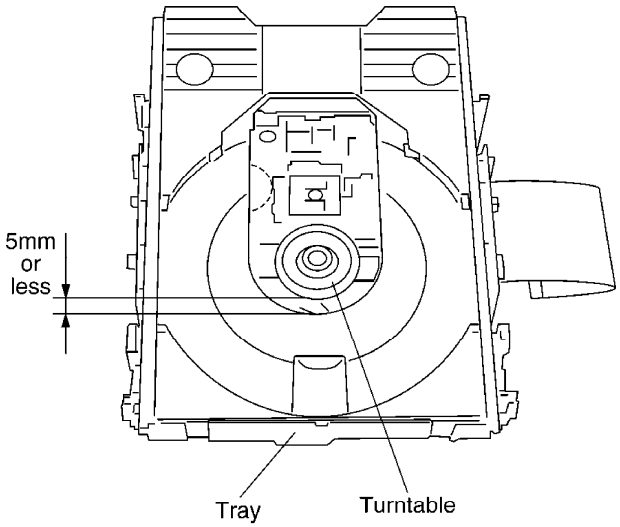
B. Inch the tray frontward until convex phase and concave phase mate.



<Figure 4>

Caution:

Make sure to mate convex phase and concave phase properly, so that the gap between turntable and tray becomes 5mm or less.



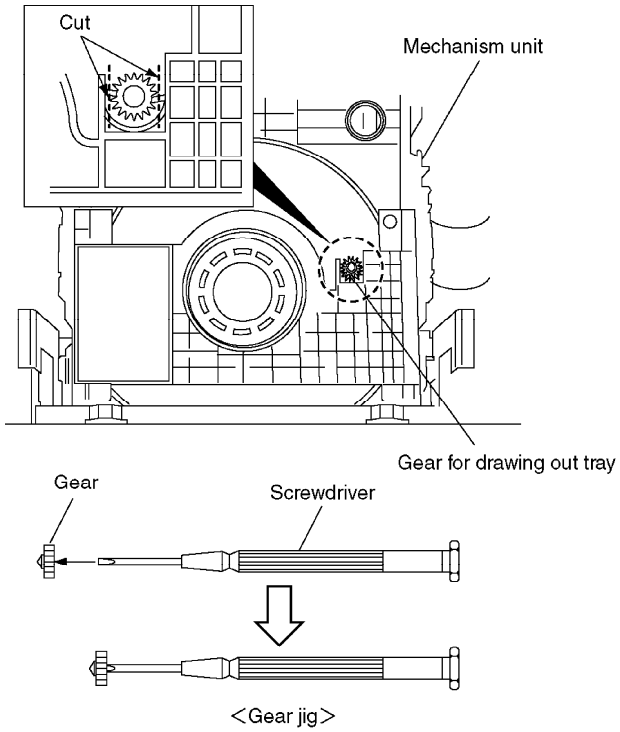
<Figure 5>

Tray open/close manual operation

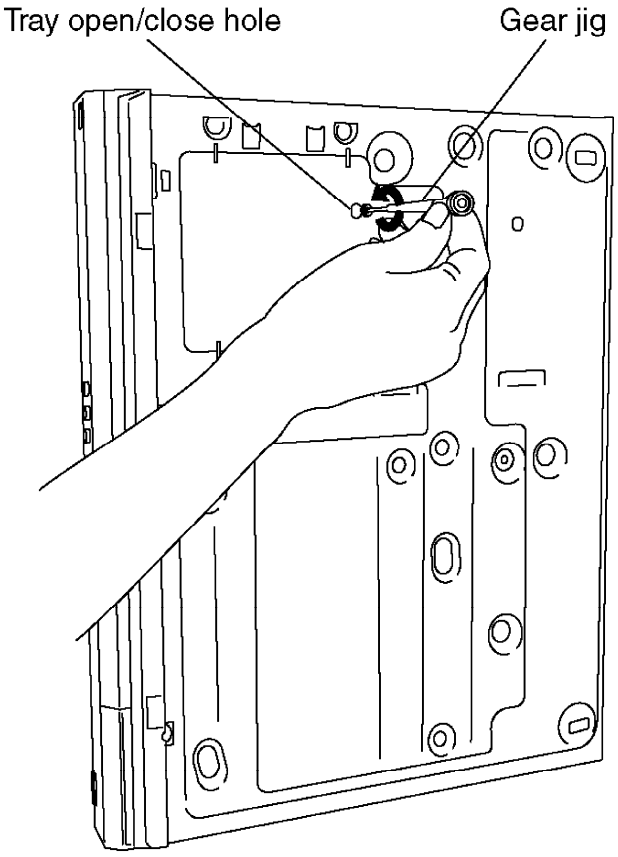
1. Remove the gear and install it onto a screwdriver to make a gear jig.

2. Insert the gear jig into the tray open/close hole.

3. Turn the gear jig counterclockwise to open the tray, or turn it clockwise to close the tray.

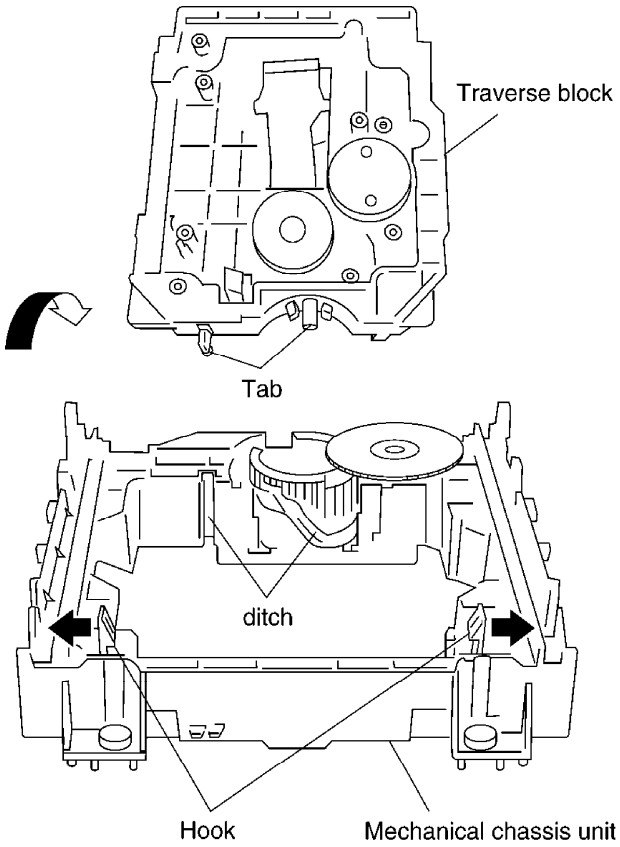


<Gear jig>



9.5. Traverse Block

1. **Lift the traverse block while spreading the hook of the mechanical chassis unit.**
2. **Disengage the tabs from the holes of the mechanical chassis unit.**



● **Take the following precautions when reassembling the traverse block.**

1. **Turn traverse gear on the traverse block to let trigger lever turn rightward. (Front view)**
2. **Bring cam gear lever to the lever adjusting position at the end of mechanical chassis unit.**
3. **Put tabs A and B into slots A and B respectively.**
   Place tabs C into hooks to mount the traverse block on mechanical chassis unit. (Slot A... Mechanical chassis unit, Slot B... Cam gear)

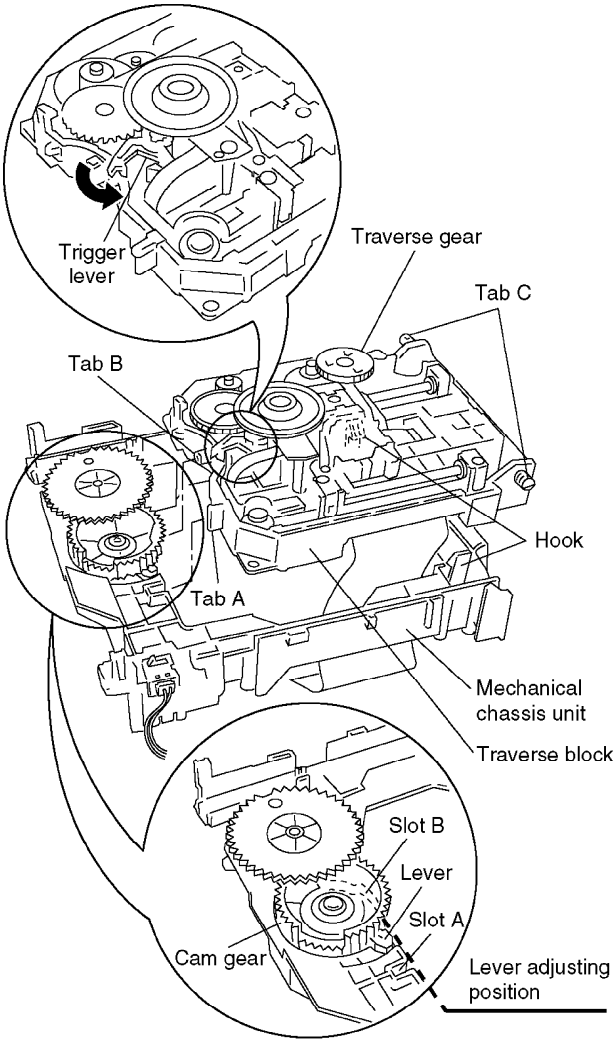
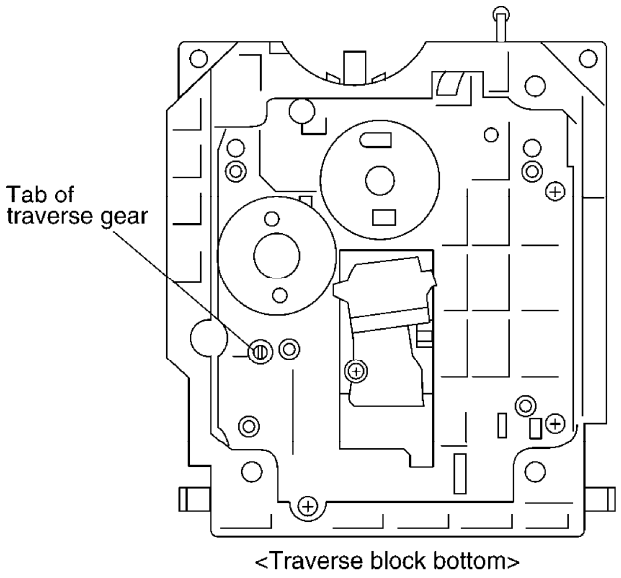


Figure 6

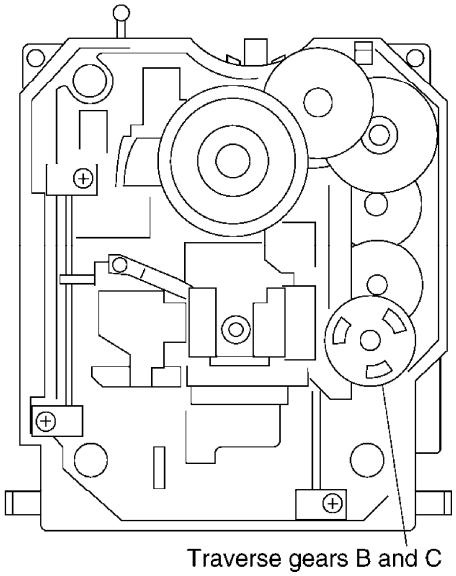
9.6. Traverse Gear

1. Disengage the tabs from the traverse gear.

2. Remove the traverse gears B and C.



<Traverse block bottom>

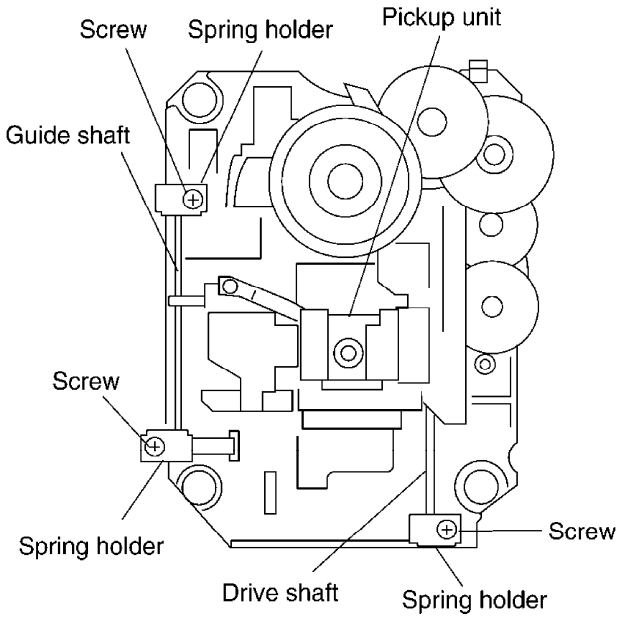


9.7. Optical Pickup Unit

1. Unscrew the screws.

2. Remove the spring holders and the springs.

3. Pull out the drive shaft and guide shaft.



9.7.1. Precautions in optical pickup replacement

The optical pickup can be damaged by static electricity from you body. Be sure to take static electricity countermeasures when working around the optical pickup. (Refer to the related page in this Manual about the countermeasures.)

1. Do not touch laser diode, actuator and their peripheries.

2. Do not use tester to check laser diode. (Laser diode can be damaged easily.)

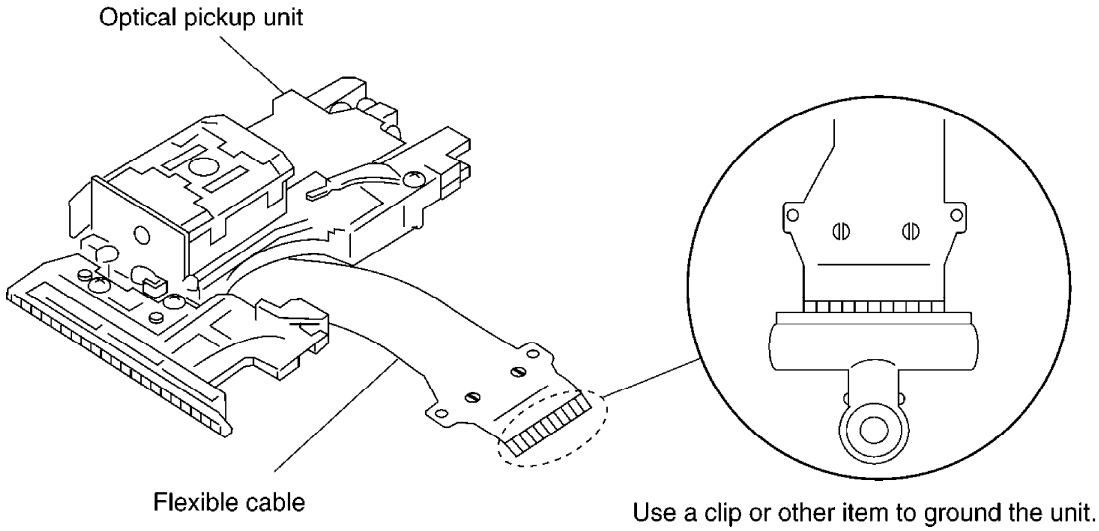
3. The use of soldering iron with anti-static feature is recommended when providing short-circuit to laser diode or when removing it.

4. Solder the land on flexible cable of optical pickup unit.

Caution

- When using the soldering iron without anti-static feature, short-circuit the flexible cable terminal with a clip before short-circuiting the land.

- After intended repair is finished, remove the solder for short-circuit of laser diode in a correct way following the procedures described in this Manual.



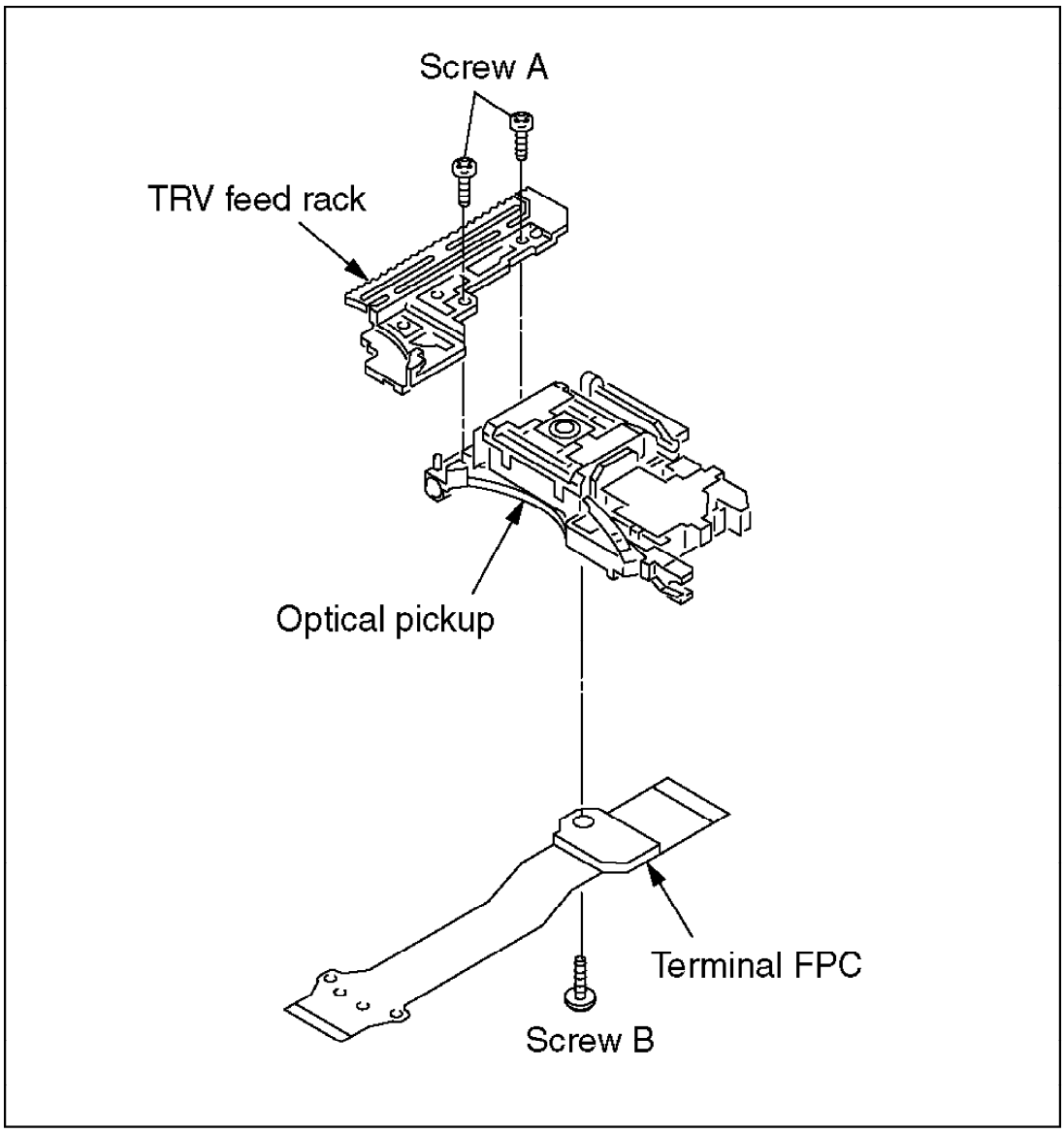
9.7.2. Disassembling the Optical Pickup Unit

1. Remove the 2 screws A and remove the TRV feed rack.

2. Remove the screw B and remove the Terminal FPC.

3. Remove the optical pickup.

Fig. 1



9.7.3. Cautions to Be Taken When Replacing the Optical Pickup

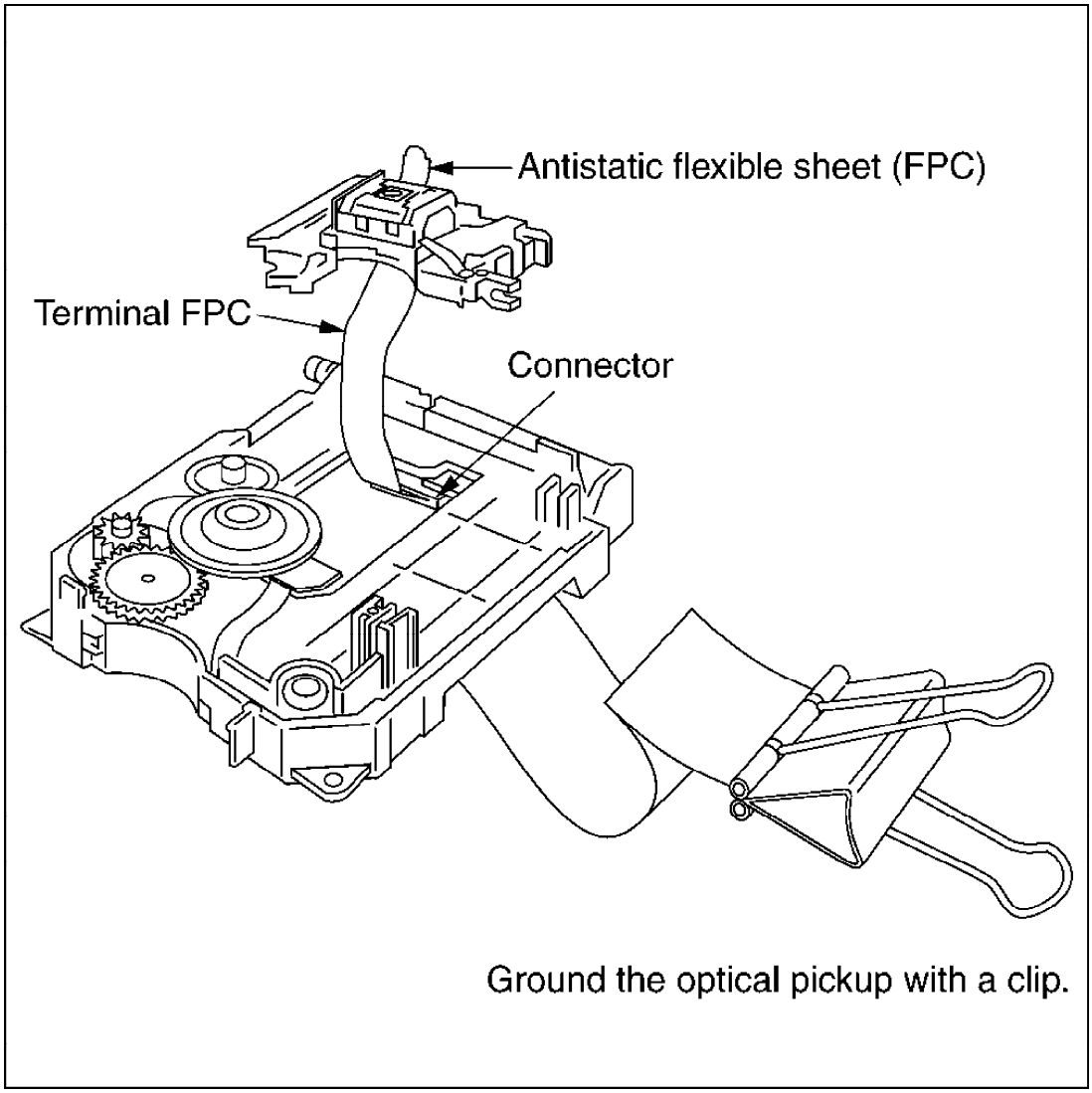
- An antistatic flexible sheet (FPC) is connected with the new optical pickup.

Replace the optical pickup according to the following procedure.

1. Install the Terminal FPC, TRV feed rack on the optical pickup. (See Fig. 1)

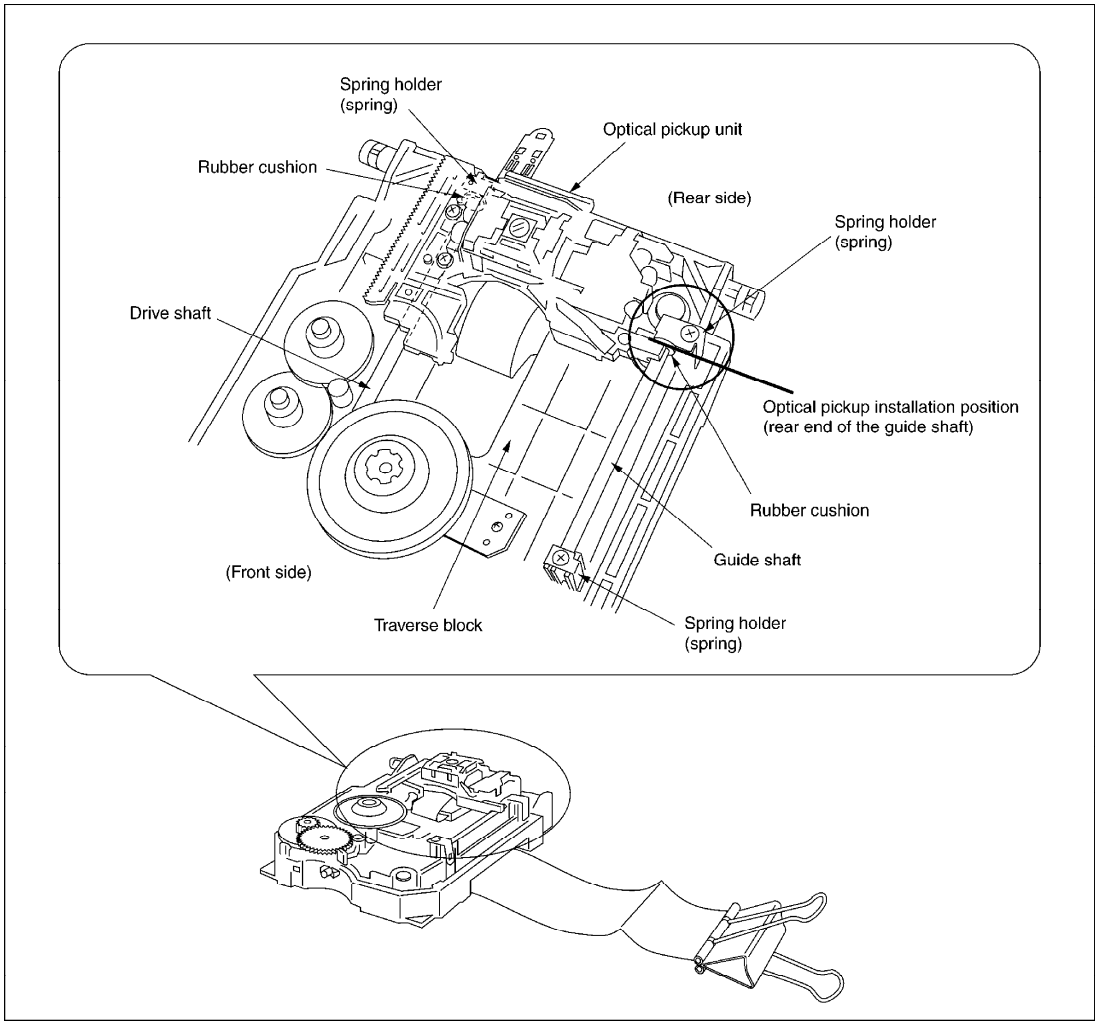
2. Install the Terminal FPC in the connector on the Terminal C.B.A..

Fig. 2



3. Install the optical pickup unit, spring, drive shaft, guide shaft, rubber cushion, and spring holder on the traverse block.

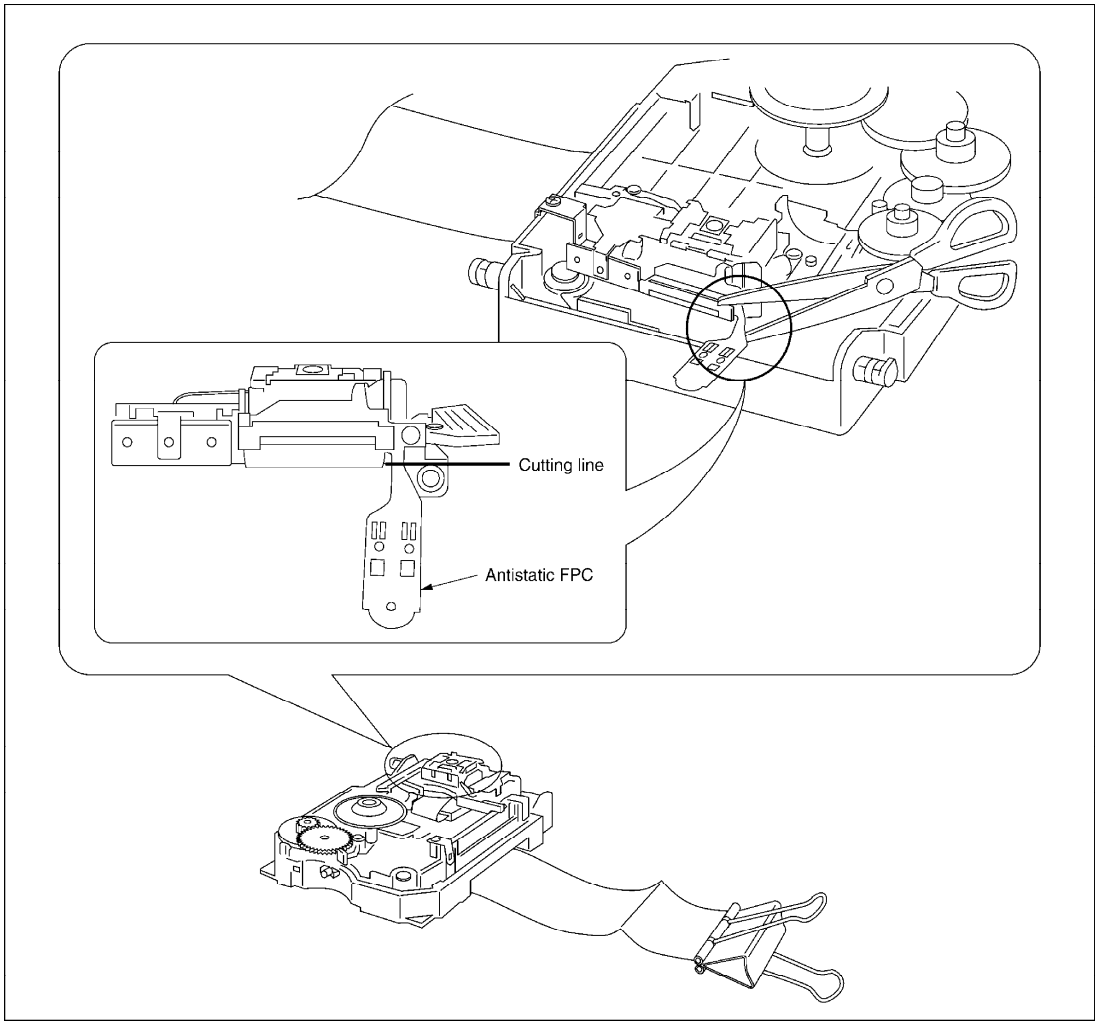
Fig. 3



Cautions to be taken when assembling the unit: Install the pickup unit so that it is located at the rear end of the guide shaft.)

4. Cut the antistatic flexible sheet for the optical pickup unit.

Fig. 4

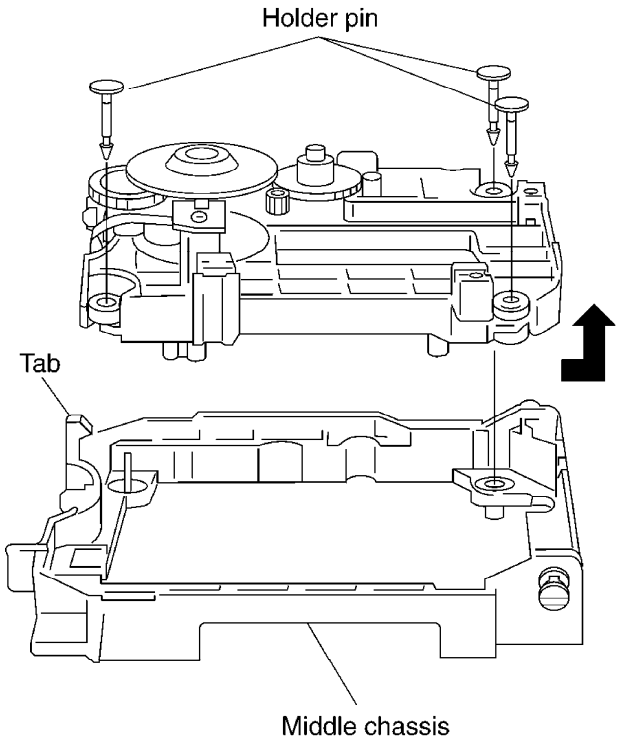


9.8. Disassembling the Middle Chassis

1. Remove the holder pins.

2. Remove the tab.

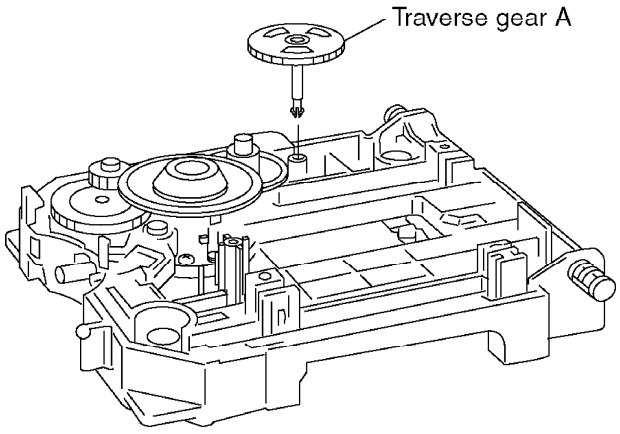
3. It lifts while pulling it in the direction of the arrow.



9.9. Disassembling the Traverse Gear A

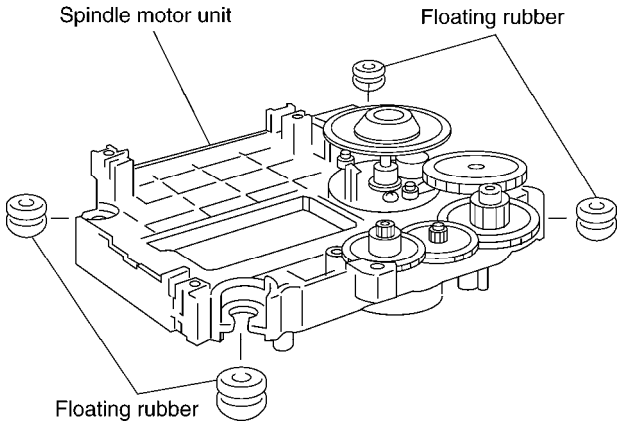
1. Unscrew the screw.

2. Remove the traverse gear A.



9.10. Disassembling the Spindle Motor Unit

1. Remove the floating rubbers.



9.11. VCR Mechanical Adjustment Procedures

Refer to the Service Manual for Z-Mechanism Chassis. (Order No. VRD9802005C2)

10. ADJUSTMENT PROCEDURES

10.1. DVD Service Tools and Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S15 or DVDT-S01
	Hex wrench	Available on sales route.
Inspection	Extension cable (VHS Main C.B.A. to DVD Interface C.B.A.)	VFK1728
	Extension cable (VHS Main C.B.A. to Power supply C.B.A.) (DVDInterface C.B.A. to Power supply C.B.A.)	VFK1730: 2pcs.
	Extension cable (VHS Main C.B.A. to Front Jack C.B.A.)	VFK1731
	Extension cable (VHS Main C.B.A. to Front Switch C.B.A.) (DVDInterface C.B.A. to Front Switch C.B.A.)	VFK1732: 2pcs.
	Extension cable (DVD Interface C.B.A. to AV Decoder C.B.A.)	JGS0116: 2pcs.
	DVD unit adjustment stand 1	VFK1727
Others	Screw lock	RZZ0L01
	Grease 1	RFKXGAK152
	Grease 2	RFKXPG641
	Oil (1)	RFKXGA1280
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc

10.2. DVD Important points in adjustment

10.2.1. Important points in optical adjustment

- Before starting optical adjustment, be sure to take anti-static measures.
- Optical pickup tilt adjustment is needed after replacement of the following components.

1. Optical pickup unit
2. Spindle motor unit
3. Optical pickup peripheral parts (such as rail)

Notes
Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment isgenerally unnecessary after replacing the traverse unit.

10.2.2. Important points in electrical adjustment

- Follow the adjustment procedures described in this Manual.

10.3. DVD Storing and Handling Test Discs

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.

1. Do not place discs directly onto the workbench, etc., after use.
2. Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioners.
3. Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustments.
4. If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

10.4. DVD Optical adjustment

10.4.1. Optical pickup tilt adjustment

Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screw Tilt adjustment screw	T01 (inner periphery) play T43 (outer periphery) play	DVDR-S15 or DVDT-S01
Measuring equipment		Adjustment value	
None (Main unit display for servicing is used.)		Adjust to the minimum jitter value.	

10.4.1.1. Adjustment procedure

1. Place the Unit in SERVICE POSITION
2. While pressing PLAY and OPEN/CLOSE buttons on the main unit, press "5" on the remote control unit in order simultaneously.
3. Confirm that "J_xxx_yyy_zz" is shown on the front display.

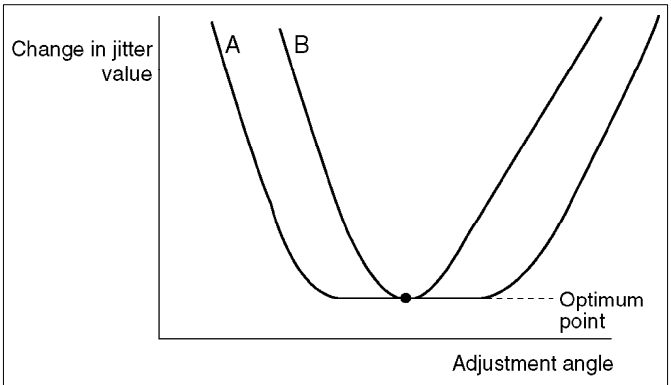
For your information:
"yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focus drive value.

Note:
Jitter value appears on the front display.

4. Play test disc T01 (inner periphery).
5. Adjust tangential adjustment screw so that the jitter value is minimized.
6. Play test disc T43 (outer periphery).
7. Adjust tilt adjustment screw 1 so that the jitter value is minimized.
8. Play test disc T43 (outer periphery).
9. Adjust tilt adjustment screw 2 so that the jitter value is minimized.
10. Repeat adjusting tilt adjustment screws 1 and 2 alternately until the jitter value is minimized.

10.4.1.2. Important points

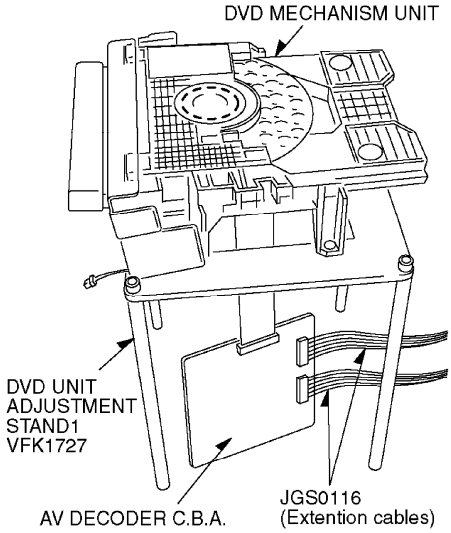
1. Make tangential adjustment first, and then make tilt adjustment.
2. Repeat adjusting two or three times to find the optimum point.
3. Finish the procedure with tilt adjustment.



Jitter value depends on the model:

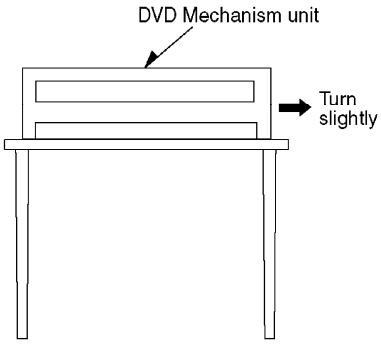
1. If the jitter value changes like B, the optimum point is easy to find.

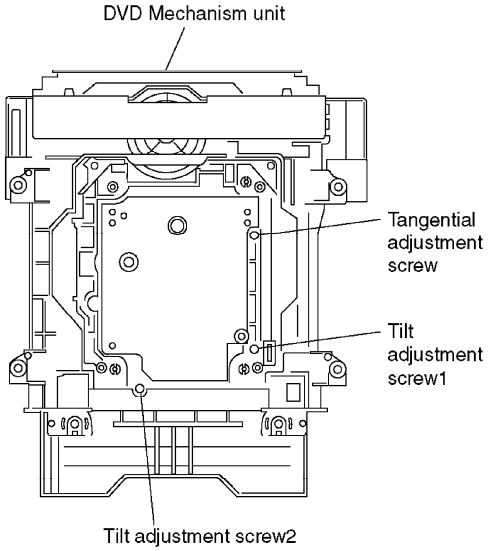
2. If the jitter value changes like A, set the optimum point near the middle.



Note:

When adjust Tilt adjustment screw 2, turn the DVD unit slightly so that the Tilt adjustment screw 2 could be adjusted.



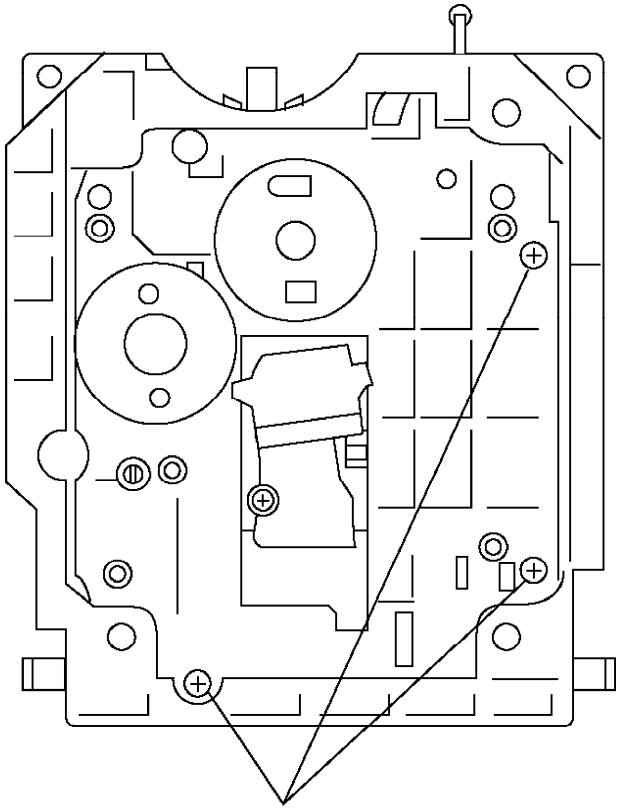


10.4.1.3. Check after adjustment

Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

10.4.1.4. Procedure for screw lock

1. **After adjustment, remove top cover, tray, clamper base and traverse unit in this sequence.**
2. **Lay the traverse unit upside down, and fix adjustment screw with screw lock.**
3. **After fixing, reassemble traverse unit, clamper base, tray and top cover.**



10.5. VCR ELECTRICAL ADJUSTMENT PROCEDURES

10.5.1. TEST EQUIPMENT

The following equipments are required for Electrical Adjustments.

1. Dual-Trace Oscilloscope

- **Voltage Range: 0.005-5V/div**
- **Frequency Range: DC-35MHz**
- **Probes: 10:1 / 1:1**

2. Frequency Counter

- **Frequency Range: 0-10MHz**
- **Probes: 1:1**

3. Universal Counter

4. Digital Volt Meter (D.V.M.)

5. Video Sweep Generator

6. Sinewave Generator

7. Video Pattern Generator

8. Monitor TV

9. DC Power Supply

10. VHS Blank Tape

11. VHS Alignment Tape

- Parts No.: VFJ8125H3F(PAL)

10.5.2. VCR SETTING

When no indication in the procedure, set each selector as follows.

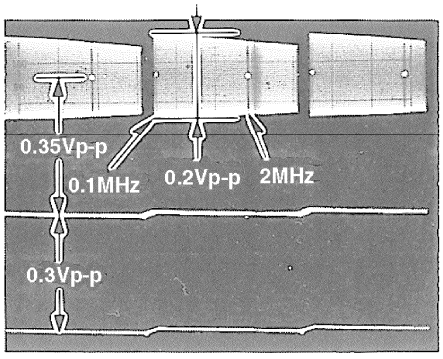
1. TAPE SPEED: SP

2. CHANNEL: AV1/AV2
(Set to signal input terminal number)

10.5.3. ADJUSTMENTS

ITEM	TP	ADJ.	MODE	INPUT	TAPE	M. EQ.	SPEC	REMARKS
PG SHIFTER ADJUSTMENT	---	---	PLAYBACK	---	ALIGNMENT TAPE (PAL)	---	---	Refer to procedure of PG SHIFTER ADJUSTMENT as shown in Fig. E4.
AI FUNCTION ADJUSTMENT	---	---	PLAYBACK (SELF-REC)	PAL COLOUR BAR	BLANK TAPE	---	---	Refer to the procedure of AI FUNCTION ADJUSTMENT as shown in Fig. E5.
VIDEO FREQUENCY RESPONSE ADJUSTMENT	VIDEO OUT	---	SP/LP/EP PLAYBACK (SELF-REC)	VIDEO SWEEP (See Fig. E1)	BLANK TAPE	OSCILLO SCOPE/ VIDEO SWEEP GENERAT OR	SP: 0+-1 (dB) (90~110%) LP: 0+-1 (dB) (90~110%) EP: 0+-3 (dB) (70~140%) (See Fig. E2)	Refer to the procedure of VIDEO FREQUENCY RESPONSE ADJUSTMENT as shown in Fig. E6.
RECORDING CURRENT ADJUSTMENT	TW3030	VR5501 (SECAM REC-C)	SELF-REC	SECAM COLOUR BAR	BLANK TAPE	OSCILLO SCOPE	47+-4mVp-p (See Fig. E3)	Refer to the procedure of RECORDING CURRENT ADJUSTMENT shown in Fig. E7.

Fig.E1



CONDITION: BURST SIGNAL OFF / 75 ohm TERMINATED

Fig.E2

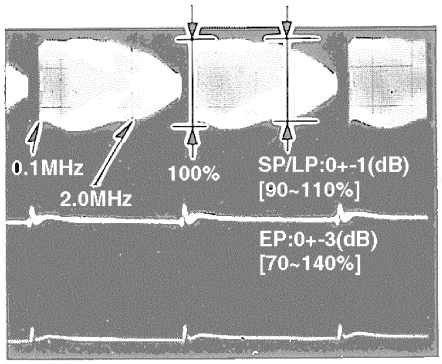
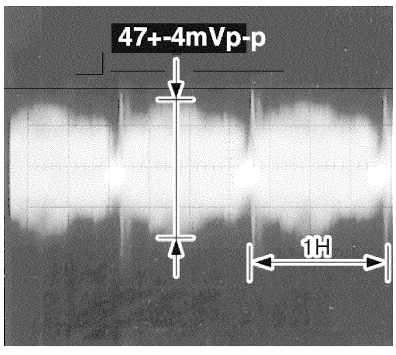


Fig.E3



10.5.4. PG SHIFTER ADJUSTMENT / (AUTOMATIC)

PROCEDURES	FIP DISPLAY
Press the FF and EJECT Keys simultaneously for 3 seconds.	
Press the FF and EJECT Keys simultaneously twice.	
Press the EJECT key for 3 seconds.	
Press the CH UP key once.	
Insert the Alignment cassette tape. (PAL:VFJ8125H3F)	
When the sequence of the automatical adjustment has been terminated, the following action has been made. *SUCCEED: The cassette tape is ejected. *ERROR : The "F2"is displayed on the FIP. (Check the Servo/Syscon circuit and Cylinder unit.)	
Release the Service mode by pressing the EJECT and FF keys simultaneously in 6 times until the FIP becomes normal indication.	

Fig. E4

10.5.5. AI FUNCTION ADJUSTMENT (AUTOMATIC)

PROCEDURES	FIP DISPLAY
Press the FF and EJECT Keys simultaneously for 3 seconds.	
Press the FF and EJECT Keys simultaneously twice.	
Press the EJECT key for 3 seconds.	
Press the CH UP key in 3 times.	
Insert the blank cassette tape. (The adjustment is automatically started.)	
When the sequence of the automatical adjustment has been terminated successfully, the VCR goes to STOP mode.	
Release the Service mode by pressing the EJECT and FF keys simultaneously in 6 times until the FIP becomes normal indication.	

Fig. E5

10.5.6. VIDEO FREQUENCY RESPONSE ADJUSTMENT

PROCEDURES	FIP DISPLAY
Input the Video sweep signal. (See Fig.E1)	
Press the FF and EJECT Keys simultaneously for 3 seconds.	
Press the FF and EJECT Keys simultaneously twice.	
Press the EJECT key for 3 seconds.	
Press the CH UP and/or CH DOWN key until "11" is displayed on FIP.	
Insert the Self-recorded tape and playback it. (SP/LP/EP mode)	
Connect the Oscilloscope to: ***CH1....Video Out (TW3002).** ***CH2....V.FREQ.(TW6002)**	
Press the "4" key on the remote controller. (Confirm that TW6002 becomes high(5V)).	

PROCEDURES	FIP DISPLAY
Adjust the Frequency response by pressing the "2"(increase) and/or "8"(decrease) key on the Remote Controller. (See Fig.E2)	
Store the Adjusted value by pressing the "5" key on the Remote Controller.	
Release the Service mode by pressing the EJECT and FF keys simultaneously in 6 times until the FIP becomes normal indication.	

Fig. E6

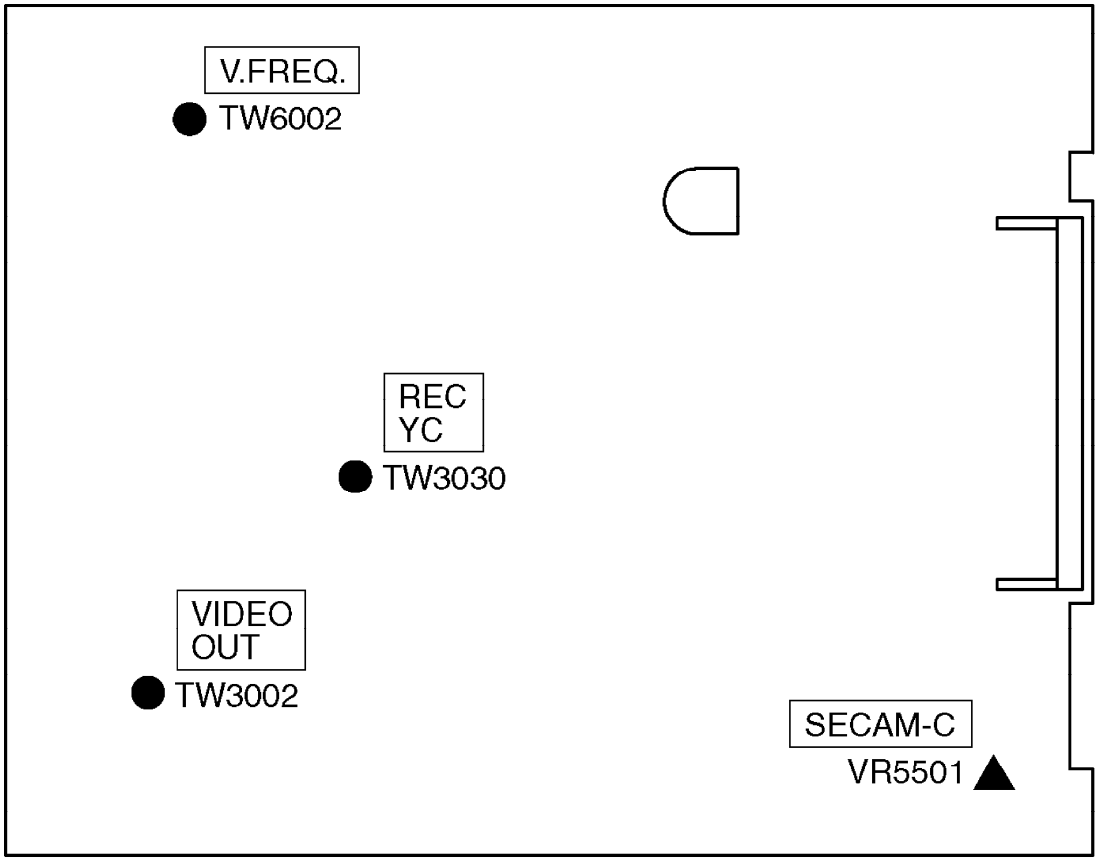
10.5.7. RECORDING CURRENT ADJUSTMENT

PROCEDURES	FIP DISPLAY
Input the SECAM COLOUR BAR signal.	
Press the FF and EJECT Keys simultaneously for 3 seconds.	
Press the FF and EJECT Keys simultaneously twice.	
Press the EJECT key for 3 seconds.	
Press the CH UP and/or CH DOWN key until "5" is displayed on the FIP. ("Y(Luminance)" components is disappeared.)	
Insert the tape and make recording mode.(SP mode)	
Connect the Oscilloscope to TW3030.	
Adjust the VR5501 until TW3030 becomes:47+-4mVp-p. (See Fig.E3).	
Release the Service mode by pressing the EJECT and FF keys simultaneously 6 times until the FIP becomes normal indication.	

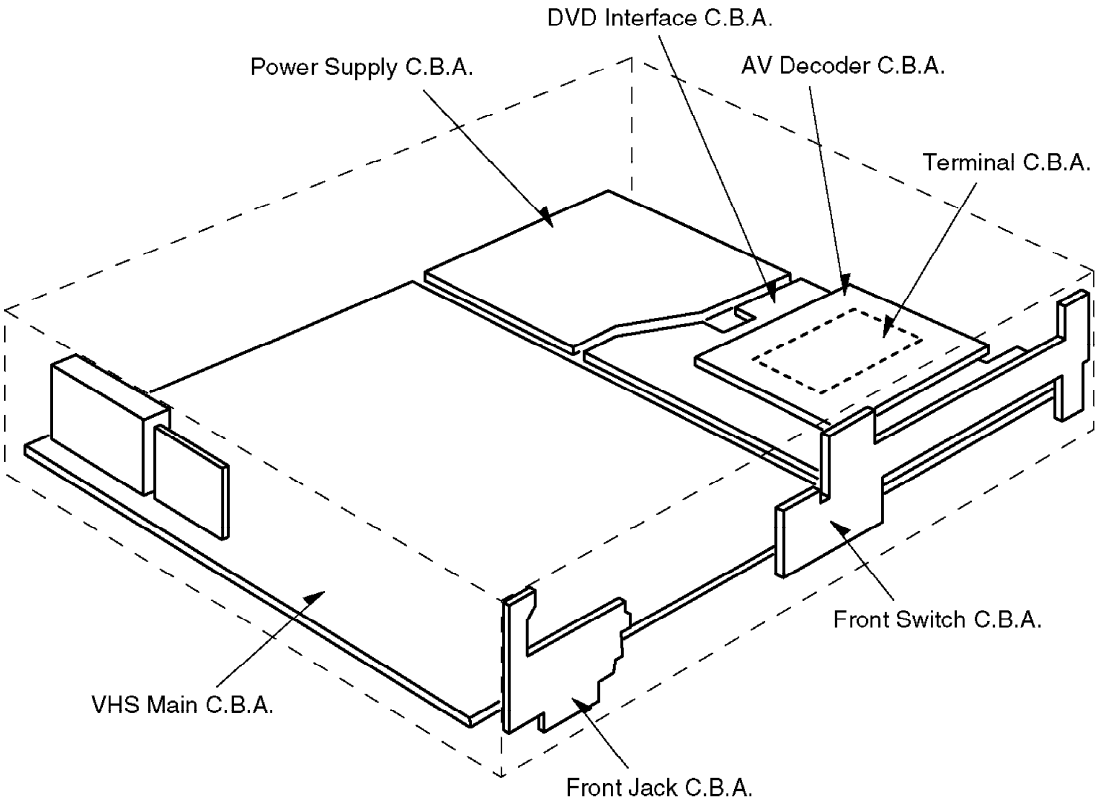
Fig. E7

10.5.8. LOCATION OF TEST POINTS& CONTROLS

VHS MAIN C.B.A.



10.5.9. CIRCUIT BOARD LAYOUT



11. ABBREVIATIONS

[DVD SECTION]

INITIAL/LOGO		ABBREVIATIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARF	AUDIO RF
	ASI	SERVO AMP INVERTED INPUT
	ASO	SERVO AMPOUTPUT
	ASYNC	AUDIO WORD DISTINCTION SYNC
B	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	BYTCK	BYTE CLOCK
C	CAV	CONSTANT ANGULAR VELOCITY
	CBDO	CAP. BLACK DROP OUT
	CD	COMPACT DISC
	CDSCK	CD SERIAL DATA CLOCK
	CDSRDATA	CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEM CLOCKSELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPWR	CPU WRITE ENABLE
	CS	CHIPSELECT
	CSYNCIN	COMPOSITE SYNC IN
	CSYNCOUT	COMPOSITE SYNC OUT

INITIAL/LOGO		ABBREVIATIONS
D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DEEMPHASIS BIT ON/OFF
	DEMPH	DEEMPHASIS SWITCHING
	DIG0~UP	FL DIGIT OUTPUT
	DIN	DATA INPUT
	DMSRCK	DM SERIAL DATA READ CLOCK
	DMUTE	DIGITAL MUTE CONTROL
	DO	DROP OUT DATAOUTPUT
	DOUT0~UP	DATA SLICE RF (BIAS)
	DRF	DROP OUT SIGNAL
	DRPOUT	DATA REQUEST
	DREQ	DATA RESPONSE
	DRESP	DIGITAL SERVO CONTROLLER
	DSC	DATA SLICE LOOP FILTER
	DSLF	DIGITAL VIDEO DISC
	DVD	

INITIAL/LOGO		ABBREVIATIONS
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/ 40.5MHz)
	ETSCLK	EXTERNAL S CLOCK (54MHz)
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP
	FEO	INVERTED INPUT
	FG	FOCUS ERROR AMP OUTPUT
	FSC	FREQUENCY GENERATOR
	FSCK	FREQUENCY SUB CARRIER
		FS (384 OVER SAMPLING) CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE
I	IECOUT	IEC958 FORMAT DATA
	IPFRAG	OUTPUT
	IREF	INTERPOLATION FLAG
	ISEL	I (CURRENT) REFERENCE
		INTERFACE MODE SELECT
L	LDON	LASER DIODE CONTROL
	LPC	LASER POWER CONTROL
	LRCK	L CH/R CH DISTINCTION CLOCK
M	MA0~UP	MEMORY ADDRESS
	MCK	MEMORY CLOCK
	MCKI	MEMORY CLOCK INPUT
	MCLK	MEMORY SERIAL COMMAND
	MDATA	CLOCK
	MDQ0~UP	MEMORY SERIAL COMMAND
	MDQM	DATA
	MLD	MEMORY DATA INPUT/OUTPUT
	MPEG	
		MEMORY DATA I/O MASK
		MEMORYSERIAL COMMAND LOAD
		MOVING PICTURE EXPERTS GROUP

INITIAL/LOGO		ABBREVIATIONS
O	ODC	OPTICAL DISC CONTROLLER
	OFTR	OFF TRACKING
	OSCI	OSCILLATOR INPUT
	OSCO	OSCILLATOR OUTPUT
	OSD	ON SCREEN DISPLAY
P	P1~UP	PORT
	PCD	CD TRACKING PHASE
	PCK	DIFFERENCE
	PDVD	PLL CLOCK
	PEAK	DVD TRACKING PHASE
	PLLCLK /	DIFFERENCE
	PLLOK	CAP. FOR PEAK HOLD
	PWMCTL	CHANNEL PLL CLOCK
	PWMDA	PLL LOCK
	PWMOA, B	PWM OUTPUT CONTROL
		PULSE WAVE MOTOR DRIVEA
		PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO		ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE
	RS	OUTPUT
	RSEL	(CD-ROM) REGISTER SELECT
	RST	RF POLARITY SELECT
	RSV	RESET
		RESERVE
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK
	SCL	RECEIVER
	SCLK	SERIAL CLOCK
	SDA	SERIAL CLOCK
	SEG0~UP	SERIAL DATA
	SELCLK	FL SEGMENT OUTPUT
	SEN	SELECTCLOCK
	SIN1, 2	SERIAL PORT ENABLE
	SOUT1, 2	SERIAL DATA IN
	SPDI	SERIAL DATA OUT
	SPDO	SERIAL PORT DATA INPUT
	SPEN	SERIAL PORT DATA OUTPUT
	SPRCLK	SERIAL PORT R/W ENABLE
	SPWCLK	SERIAL PORT READ CLOCK
	SQCK	SERIAL PORT WRITE CLOCK
	SQCX	SUB CODE Q CLOCK
	SRDATA	SUBCODE Q DATA READ
	SRMADR	CLOCK
	SRMDT0~7	SERIAL DATA
		SRAM ADDRESS BUS
	SS	SRAM DATA BUS 0~7
	STAT	START/STOP
	STCLK	STATUS
	STD0~UP	STREAM DATA CLOCK
	STENABLE	STREAM DATA
		STREAM DATA INPUT ENABLE
	STSEL	STREAM DATA POLARITY
	STVALID	SELECT
	SUBC	STREAM DATAVALIDITY
	SBCK	SUB CODE SERIAL
	SUBQ	SUB CODE CLOCK
	SYSCLK	SUB CODE Q DATA
		SYSTEM CLOCK

INITIAL/LOGO		ABBREVIATIONS
T	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSSSIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INITIAL/LOGO		ABBREVIATIONS
V	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY VOLTAGE
	VCDCONT	VIDEO CD CONTROL (TRACKING
	VDD	BALANCE)
	VFB	DRAIN POWER SUPPLY
	VREF	VOLTAGE
	VSS	VIDEO FEED BACK
		VOLTAGE REFERENCE
		SOURCE POWER SUPPLYVOLTAGE
W	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER
X	X	X' TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPTREQUEST
	XI	X' TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X' TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIPSELECT
	XVDS	X V-DEC CONTROL BUS
	XVSYNCO	STROBE
		X VERTICAL SYNC OUTPUT

[VCR SECTION]

12. INPUT/ OUTPUT CHART

12.1. INPUT/ OUTPUT CHART FOR IC6001

12.2. TRUTH TABLE (EC/EE/F MODEL)

12.3. TRUTH TABLE (B MODEL)

13. WAVEFORM TABLE& VOLTAGE CHART

13.1. WAVEFORM TABLE

13.2. VOLTAGE CHART

14. BLOCK DIAGRAMS

14.1. POWER SUPPLY BLOCK DIAGRAM

14.2. VCR LUMINANCE& CHROMINANCE BLOCK DIAGRAM

14.3. VCR AUDIO BLOCK DIAGRAM

14.4. VCR SYSTEM CONTROL& SERVO BLOCK DIAGRAM

14.5. DVD OVERALL BLOCK DIAGRAM

14.6. DVD VIDEO BLOCK DIAGRAM

14.7. DVD SERVO BLOCK DIAGRAM

14.8. DVD AUDIO BLOCK DIAGRAM

15. SCHEMATIC DIAGRAMS

15.1. POWER SCHEMATIC DIAGRAM

15.2. POWER SUPPLY/RF SECTION IN MAIN SCHEMATIC DIAGRAM

15.3. INPUT/OUTPUT SECTION IN MAIN SCHEMATIC DIAGRAM

15.4. SYSTEM CONTROL& SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

15.5. LUMINANCE& CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

15.6. SECAM SECTION IN MAIN SCHEMATIC DIAGRAM (NV-VHD1F)

15.7. VCR DISPLAY SECTION IN MAIN SCHEMATIC DIAGRAM

15.8. Hi-Fi AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

15.9. DECODER SECTION IN MAIN SCHEMATIC DIAGRAM

15.10. CYLINDER STATOR UNIT SCHEMATIC DIAGRAM

15.11. CAPSTAN UNIT SCHEMATIC DIAGRAM

15.12. FRONT JACK SCHEMATIC DIAGRAM

15.13. FRONT SWITCH SCHEMATIC DIAGRAM

15.14. AV DECODER SECTION IN AV DECODER SCHEMATIC DIAGRAM

15.15. NODC SECTION IN AV DECODER SCHEMATIC DIAGRAM

15.16. DVD DISPLAY SECTION IN DVD INTERFACE SCHEMATIC DIAGRAM

15.17. AUDIO DAC SECTION IN DVD INTERFACE SCHEMATIC DIAGRAM

15.18. FEP& DRV IN TERMINAL SCHEMATIC DIAGRAM

15.19. TV DEMODULATOR PACK SCHEMATIC DIAGRAM (NV-VHD1B/EC/EE)

15.20. TV DEMODULATOR PACK SCHEMATIC DIAGRAM (NV-VHD1F)

16. CIRCUIT BOARD ASSEMBLIES

16.1. POWER C.B.A.

16.2. FRONT JACK C.B.A.

16.3. FRONT SWITCH C.B.A.

16.4. MAIN C.B.A.

16.5. CYLINDER STATOR UNIT

16.6. DVD INTERFACE C.B.A.

16.7. AV DECODER C.B.A.

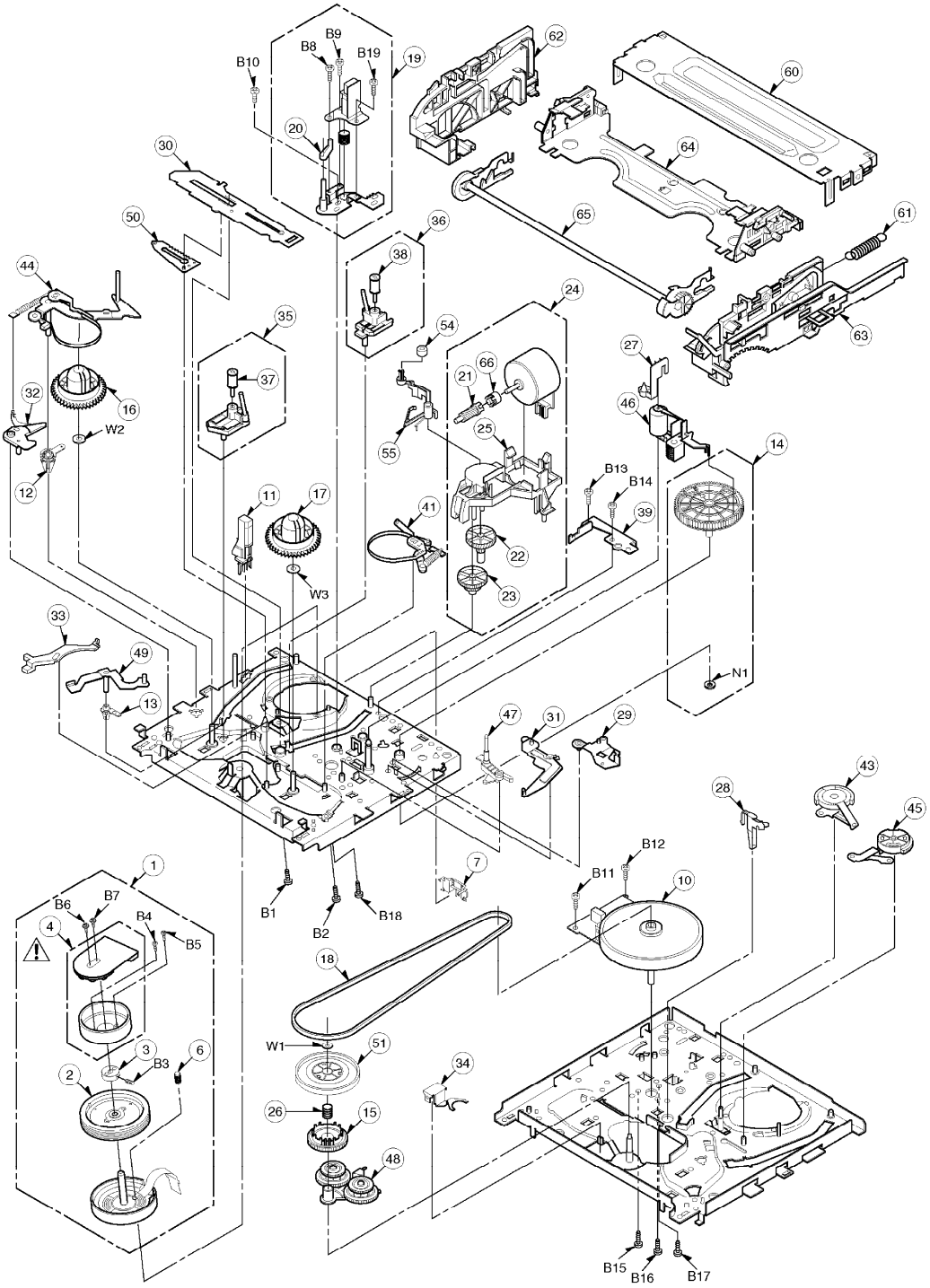
16.8. TERMINAL C.B.A.

16.9. TV DEMODULATOR PACK C.B.A. (NV-VHD1B/EC/EE)

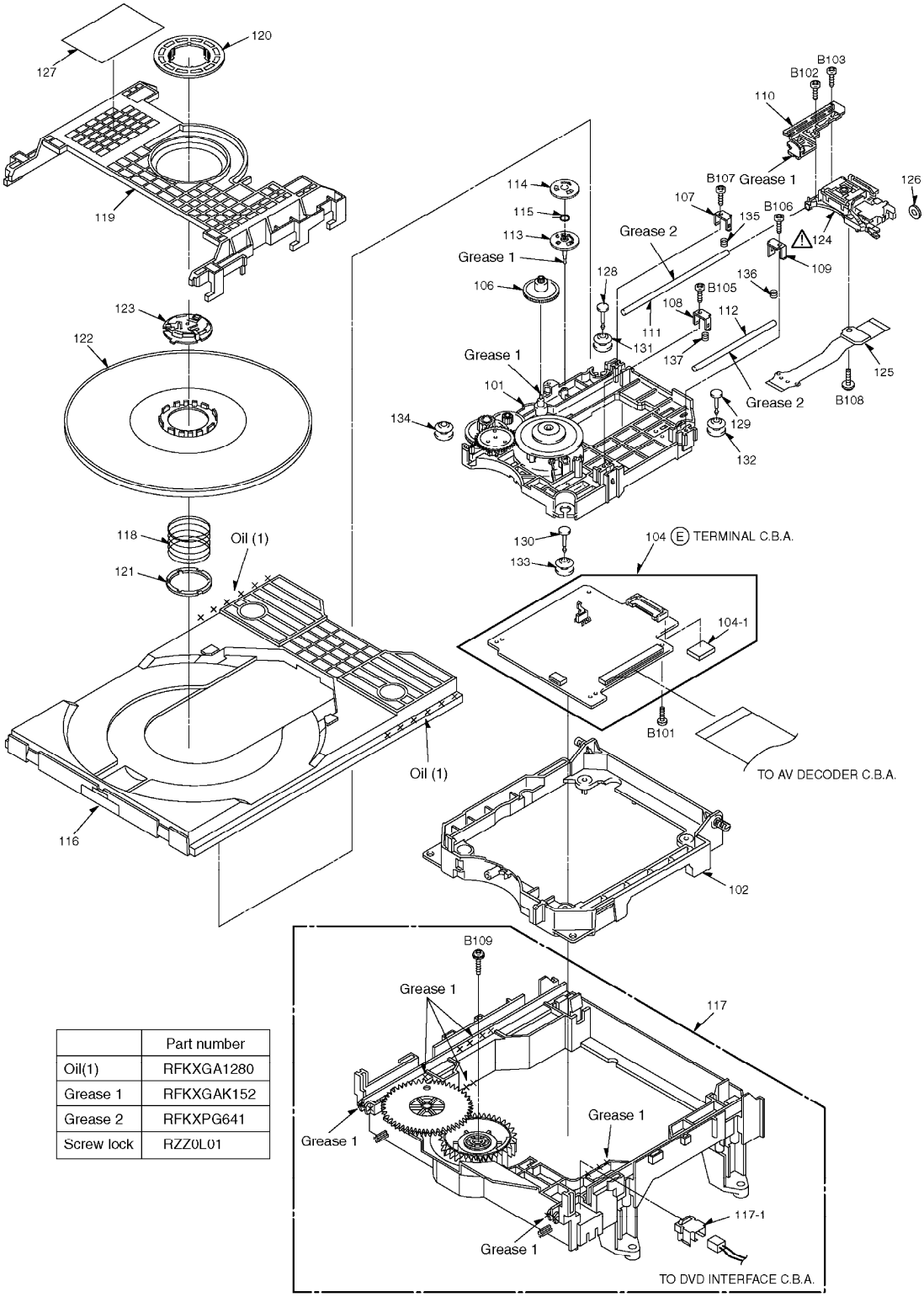
16.10. TV DEMODULATOR PACK C.B.A. (NV-VHD1F)

17. EXPLODED VIEWS

17.1. VCR CHASSIS PARTS SECTION

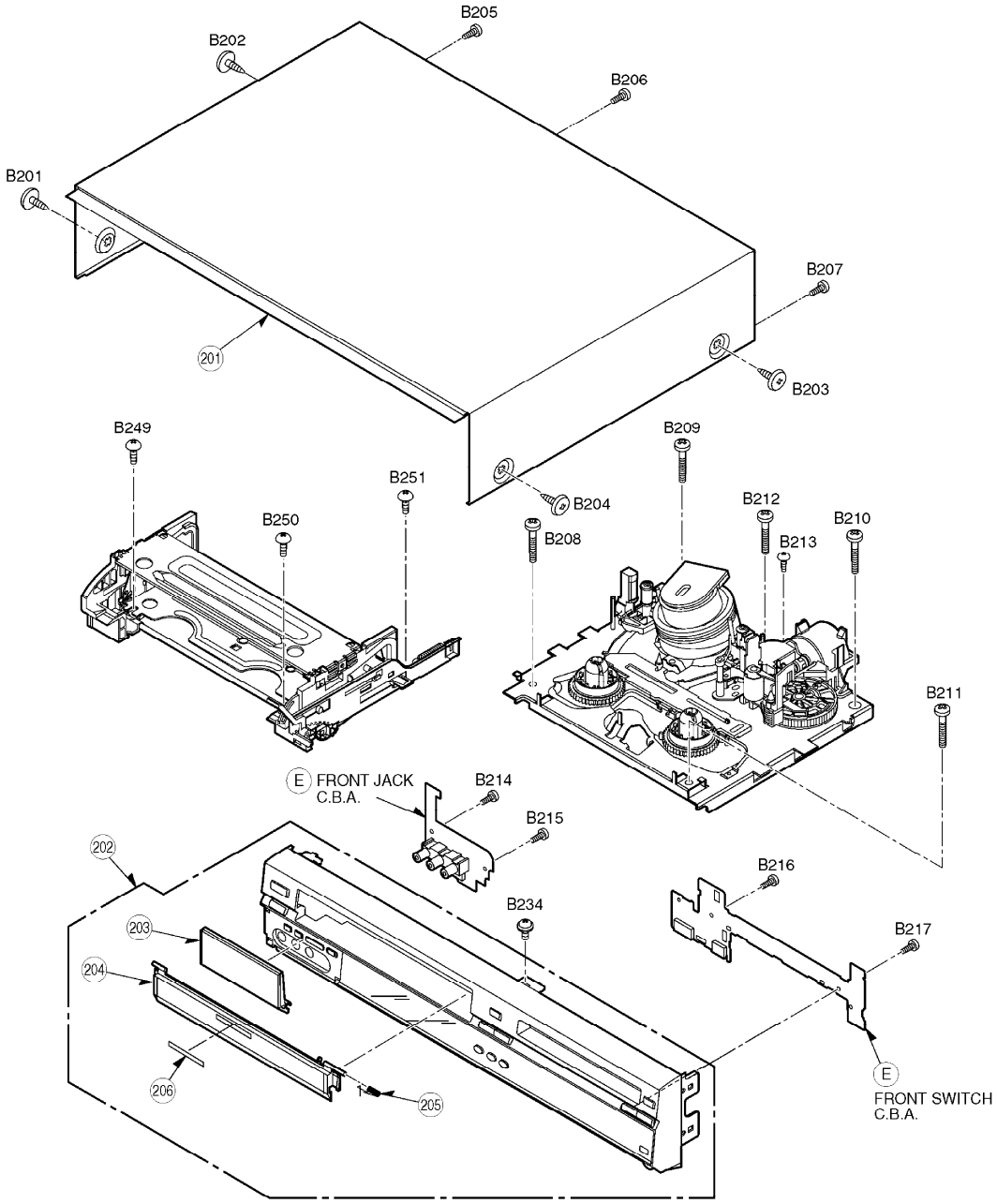


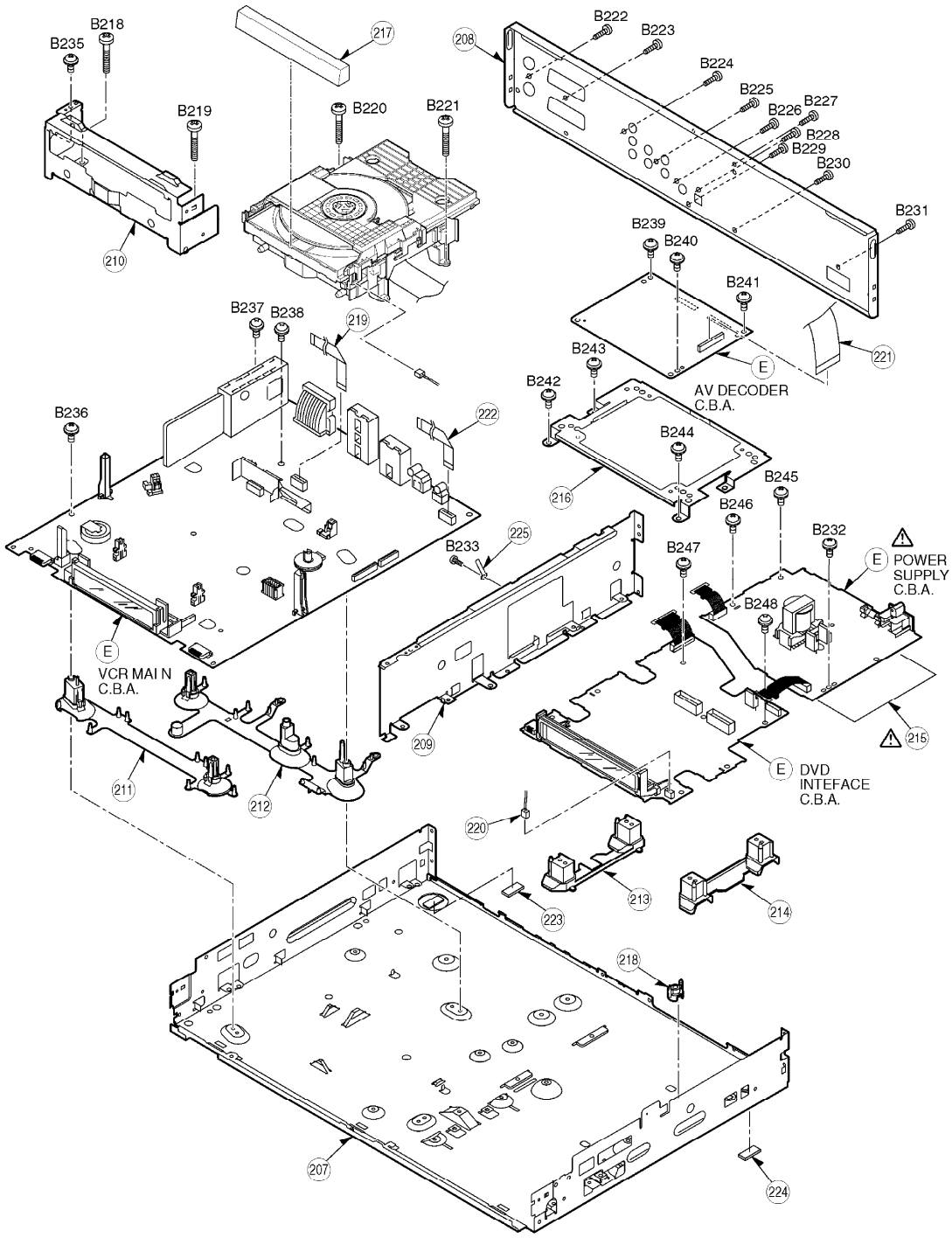
17.2. DVD CHASSIS PARTS SECTION



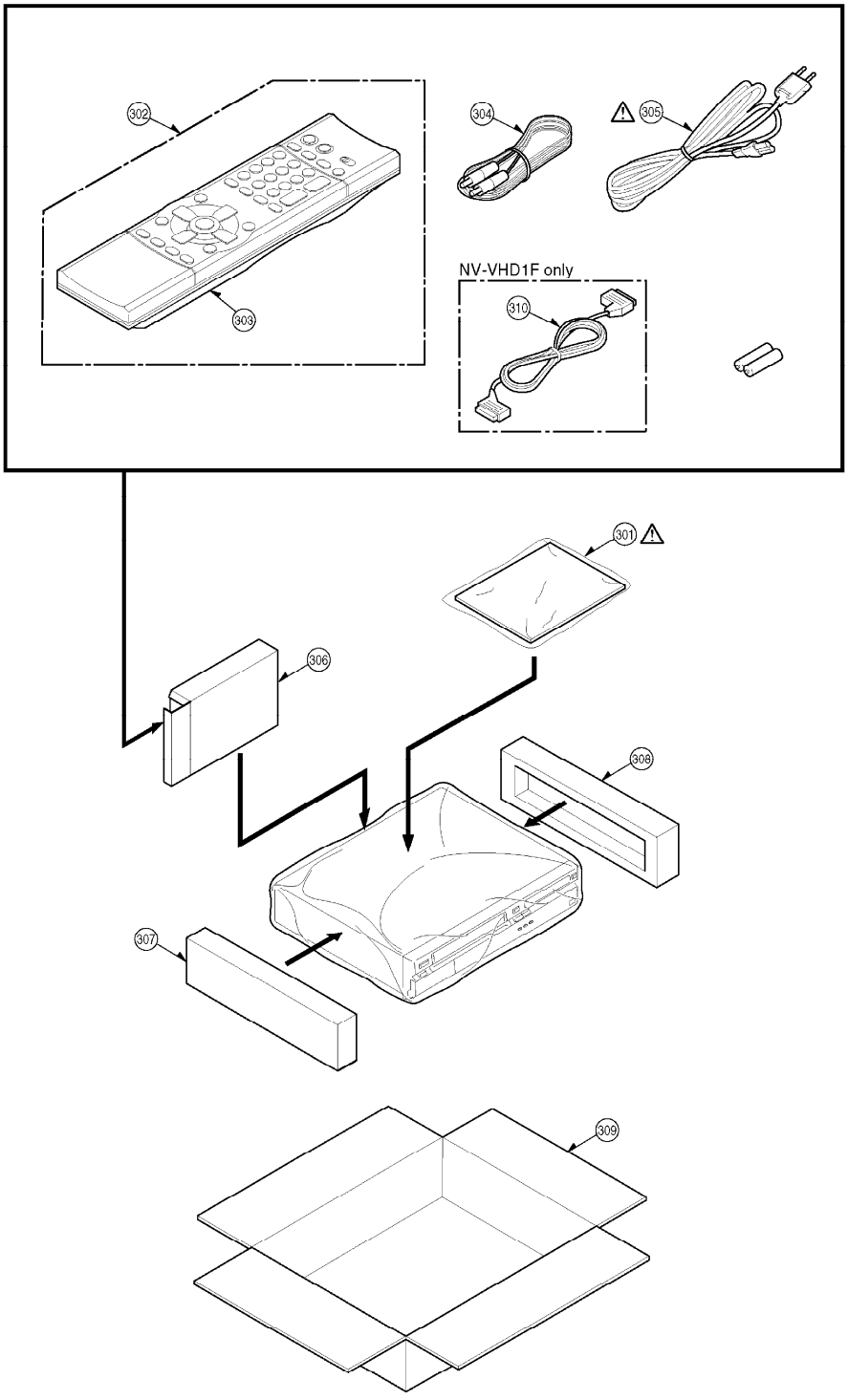
	Part number
Oil(1)	RFKXGA1280
Grease 1	RFKXGAK152
Grease 2	RFKXPG641
Screw lock	RZZ0L01

17.3. CASING PARTS SECTION


B205
B202
B206
B201
B207
201
B203
B249
B209
B251
B204
B212
B250
B208
B213
B210
B211
E FRONT JACK C.B.A.
B214
B215
202
B216
B234
203
B217
204
206
205
E FRONT SWITCH C.B.A.



17.4. PACKING PARTS SECTION



18. REPLACEMENT PARTS LIST

18.1. VCR CHASSIS PARTS SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. " [MAVD] " in the Remarks column shows that the parts is/are supplied from MAVD.

Ref. No.	Part No.	Part Name & Description	Remarks
1	VEG1598	CYLINDER UNIT	[MAVD]
2	VXP2170	UPPER CYLINDER UNIT	[MAVD]
3	VDB1256	CYLINDER RETAINER	
4	VEM0715	CYLINDER MOTOR UNIT	⚠
6	VXS0135	EARTH BRUSH UNIT	
7	VMD3795	FLAT CABLE HOLDER	
10	VEK9069	CAPSTAN UNIT	
11	L1AZ00000004	FE HEAD	
12	VDB1431	TENSION ARM BOSS	
13	VDB1460	SUPPLY BRAKE ARM BOSS	
14	VDG1220KIT	MAIN CAM GEAR	
15	VDG1221	CONVERSION GEAR	
16	VDR0350	REEL TABLE	
17	VDR0350	REEL TABLE	
18	VDV0382	CAPSTAN BELT	
19	VED0412	A/C HEAD UNIT	
20	VMX2656	P4 CAP	
21	VDG1217	WORM GEAR	
22	VDG1218	WORM WHEEL GEAR	
23	VDG1219	CENTRE GEAR	
24	VEM0604	LOADING MOTOR UNIT	
25	VMD2619	MOTOR BRACKET	
26	VMB3045	CONVERSION GEAR SPRING	
27	VMD2620	OPENER PIECE	
28	VMD2738	LED PRISM	
29	VML3165	DRIVE RACK ARM	
30	VML3166	MAIN LEVER	
31	VML3167	DRIVE MAIN LEVER ARM	
32	VML3172	SUPPLY SPRING ARM	
33	VML3176	CONVERSION LEVER A	
34	VML3177	CONVERSION LEVER B	
35	VXA6040	INCLINED BASE (S) UNIT	
36	VXA5854	INCLINED BASE (T) UNIT	
37	VXP1891	ROLLER POST	
38	VXP1891	ROLLER POST	
39	VMA9672	SUPPORT ANGLE	
41	VXL2667	TAKE UP BRAKE ARM UNIT	
43	VXL2670	TAKE UP LOADING ARM UNIT	
44	VXL2793	TENSION ARM UNIT	
45	VXL2672	SUPPLY LOADING ARM UNIT	
46	VXL2785	PINCH ARM UNIT	
47	VXL2996	P5 ARM UNIT	
48	VXL2792	IDLER ARM UNIT	
49	VXL2733	SUPPLY BRAKE ARM UNIT	
50	VXL2747	LOADING RACK UNIT	
51	VXP2035	CENTRE CLUTCH UNIT	
54	VDP1668-K	CLEANER ROLLER	
55	VML3164	CLEANER ARM	
60	VMA9516	TOP PLATE	
61	VMB3047	CONNECTION SPRING	
62	VMD3379	SIDE PLATE (L)	
63	VXA6540	SIDE PLATE (R) UNIT	
64	VXA5746	CASSETTE HOLDER UNIT	
65	VXP1730	MAIN SHAFT UNIT	
66	VDP1660	MOTOR COUPLING	[MAVD]

Ref. No.	Part No.	Part Name & Description	Remarks
B1	VHD1118	SCREW	
B2	VHD1118	SCREW	
B3	VHD0842	SCREW	
B4	VHD0843	SCREW	
B5	VHD0843	SCREW	
B6	VHD0844	SCREW	
B7	VHD0844	SCREW	
B8	VHD1066	SCREW	
B9	VHD1066	SCREW	
B10	VHD1044	SCREW	
B11	VHD1060	SCREW	
B12	VHD1071	SCREW	
B13	XTS26+6F	SCREW	
B14	XTN26+6F	SCREW	
B15	XTN26+7J	SCREW	
B16	XTN26+7J	SCREW	
B17	XTN26+7J	SCREW	
B18	VHD1095	SCREW	
B19	VHD1185	SCREW	
N1	VHN0311	PUSH NUT	
W1	VMX2208	WASHER	
W2	VMX3022	WASHER	
W3	VMX3022	WASHER	

18.2. DVD CHASSIS PARTS SECTION PARTS LIST

Note. 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. " [MAVD] " in the Remarks column shows that the parts is/are supplied from MAVD.

Ref. No.	Part No.	Part Name & Description	Remarks
101	RXQ0745B	SPINDLE MOTOR ASS'Y	
102	RMR1376-K	MIDDLE CHASSIS	
104	REP3091A-1N	TERMINAL C.B.A.	(RTL)[MAVD]
104-1	RMGC0558-K	PCB RUBBER	
106	RDG0499-1	TRAVERSE GEAR(A)	
107	RMC0415	ADJUST SPRING HOLDER 1	
108	RMC0415	ADJUST SPRING HOLDER 1	
109	RMC0416	ADJUST SPRING HOLDER 2	
110	RMM0234	TRAVERSE DRIVE RACK	
111	RMSC0710	DRIVE SHAFT	
112	RMSC0711	GUIDE SHAFT	
113	RDG0500	TRAVERSE GEAR(B)	
114	RDG0501	TRAVERSE GEAR(C)	
115	RMEC0319	TRAVERSE GEAR SPRING	
116	RGQ0280-K4	TRAY	
117	RXQ0748	MECHA CHASSIS ASS'Y	
117-1	RSH1A049-U	OPEN SWITCH	K0F111E00093
118	RME0318	CLAMPER SPRING	
119	RMR1317-K	CLAMP PLATE	
120	RMR1318-X	FIXTURE	
121	RMR1321-X	SPRING HOLDER	
122	RXQ0724	CLAMPER ASS'Y	
123	RXQ0729	MAGNET HOLDER ASS'Y	
124	RAF3022A-1	OPTICAL PICK-UP	
125	RJB2308A	INTERFACE FPC	
126	RMG0561-T	CUSHION RUBBER	
127	RQLS0233	LASER CAUTION LABEL	
128	RMS0712	FIXED PIN	
129	RMS0712	FIXED PIN	
130	RMS0712	FIXED PIN	
131	RMG0545-A	FLOATING RUBBER	
132	RMG0545-A	FLOATING RUBBER	
133	RMG0545-A	FLOATING RUBBER	
134	RMG0545-A	FLOATING RUBBER	
135	RMEC0320	ADJUST SPRING	
136	RMEC0320	ADJUST SPRING	
137	RMEC0320	ADJUST SPRING	
B101	RHD20060	SCREW	
B102	RHD17036	SCREW	
B103	RHD17036	SCREW	
B105	VHD1224	SCREW	
B106	VHD1224	SCREW	
B107	VHD1224	SCREW	
B108	RHD14095	SCREW	
B109	XTW3+12S	SCREW	

18.3. CASING PARTS SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. " [MAVD] " in the Remarks column shows that the parts is/are supplied from MAVD.

Ref. No.	Part No.	Part Name & Description	Remarks
201	VGM1865	TOP PANEL	[MAVD]
202	VYP8544	FRONT PANEL UNIT	[MAVD]
			NV-VHD1EC
202	VYP8565	FRONT PANEL UNIT	[MAVD]
			NV-VHD1B
202	VYP8566	FRONT PANEL UNIT	[MAVD]
			NV-VHD1F
202	VYP8585	FRONT PANEL UNIT	[MAVD]
			NV-VHD1EE
203	VKF3483	DOOR	[MAVD]
204	VKF3582	BLINDER PANEL	[MAVD]
205	VMB2521	BLINDER SPRING	
206	VGB0554	SUPER DRIVE BADGE	
207	VMP7056	CHASSIS FRAME	[MAVD]
208	VMP7210	REAR PANEL	[MAVD]
209	VMP7058	CENTRE ANGLE	[MAVD]
210	VMP7060	FRONT ANGLE	[MAVD]
211	VMX3138	MECHA SPACER(F)	[MAVD]
212	VMX3139	MECHA SPACER(R)	[MAVD]
213	VMX3140	DVD SPACER(L)	[MAVD]
214	VMX3145	DVD SPACER(R)	[MAVD]
215	VMZ3261	BARRIER(POWER)	[MAVD] ⚠
216	VMP7059	DVD ANGLE	[MAVD]
217	VGK2756	TRAY ORNAMENT	[MAVD]
218	VMP6658	C.B.A. SPACER	[MAVD]
219	VWJ1477	FFC (P4003-A/C HEAD)	[MAVD]
220	REXD0001	2P WIRE CABLE	[MAVD]
221	REZD0003	FLAT CARD CABLE (50P)	[MAVD]
222	REZD0004	FLAT CARD CABLE (9P)	[MAVD]
223	VKA0364	FOOT	[MAVD]
224	VKA0364	FOOT	[MAVD]
225	VMC1534	EARTH SPRING	
B201	VHD1094	SCREW	
B202	VHD1094	SCREW	
B203	VHD1094	SCREW	
B204	VHD1094	SCREW	
B205	XTB3+6JFC	SCREW	[MAVD]
B206	XTB3+6JFC	SCREW	[MAVD]
B207	XTB3+6JFC	SCREW	[MAVD]
B208	VHD1452	SCREW	[MAVD]
B209	VHD1452	SCREW	[MAVD]
B210	VHD1452	SCREW	[MAVD]
B211	VHD1452	SCREW	[MAVD]
B212	VHD1495	SCREW	[MAVD]
B213	XTN26+6JR	SCREW	
B214	XTBS26+10J	SCREW	
B215	XTBS26+10J	SCREW	
B216	XTBS26+10J	SCREW	
B217	XTBS26+10J	SCREW	
B218	VHD1494	SCREW	[MAVD]
B219	VHD1494	SCREW	[MAVD]
B220	VHD1494	SCREW	[MAVD]
B221	VHD1494	SCREW	[MAVD]
B222	XSN3+4FZ	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
B223	XTB4+10GFZ	SCREW	
B224	XTB3+8JFZ	SCREW	
B225	XTB3+8JFZ	SCREW	
B226	XTB3+8JFZ	SCREW	
B227	XTB3+8JFZ	SCREW	
B228	XTB3+8JFZ	SCREW	
B229	XTB3+8JFZ	SCREW	
B230	XTB3+8JFZ	SCREW	
B231	XTB3+8JFZ	SCREW	
B232	XTN3+12B	SCREW	
B233	XTW3+8TR	SCREW	[MAVD]
B234	XTW3+8TR	SCREW	[MAVD]
B235	XTW3+8TR	SCREW	[MAVD]
B236	XTW3+8TR	SCREW	[MAVD]
B237	XTW3+8TR	SCREW	[MAVD]
B238	XTW3+8TR	SCREW	[MAVD]
B239	XTW3+8TR	SCREW	[MAVD]
B240	XTW3+8TR	SCREW	[MAVD]
B241	XTW3+8TR	SCREW	[MAVD]
B242	XTW3+8TR	SCREW	[MAVD]
B243	XTW3+8TR	SCREW	[MAVD]
B244	XTW3+8TR	SCREW	[MAVD]
B245	XTW3+8TR	SCREW	[MAVD]
B246	XTW3+8TR	SCREW	[MAVD]
B247	XTW3+8TR	SCREW	[MAVD]
B248	XTW3+8TR	SCREW	[MAVD]
B249	XTV26+4F	SCREW	
B250	XTV26+4F	SCREW	
B251	XTV26+4F	SCREW	

18.4. PACKING PARTS SECTION PARTS LIST

Note. 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. " [MAVD] " in the Remarks column shows that the parts is/are supplied from MAVD.

Ref. No.	Part No.	Part Name & Description	Remarks
301	RQTD0021-B	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(ENGLISH)	NV-VHD1B
301	RQTD0022-D	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(DENMARK)	NV-VHD1EC
301	RQTD0023-F	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(FRENCH)	NV-VHD1F
301	RQTD0024-H	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(DUTCH)	NV-VHD1EC
301	RQTD0025-V	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(ITALIAN)	NV-VHD1EC
301	RQTD0026-M	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(SPANISH)	NV-VHD1EC
301	RQTD0027-Z	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(SWEDISH)	NV-VHD1EC
301	RQTD0028-J	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(DANISH)	NV-VHD1EC
301	RQTD0029-K	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(FINNISH)	NV-VHD1EC
301	RQTD0030-U	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(PORTUGUESE)	NV-VHD1EC
301	RQTD0031-Q	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(POLISH)	NV-VHD1EE
301	RQTD0032-S	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(CZECH)	NV-VHD1EE
301	RQTD0033-T	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(HANGARIAN)	NV-VHD1EE
301	RQTD0034-C	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(FRENCH)	NV-VHD1EC
301	RQTD0035-A	OPERATING INSTRUCTIONS	[MAVD] ⚠
		(ENGLISH)	NV-VHD1EC/EE
302	EUR7615KA0	REMOTE CONTROLLER	[MAVD]
			NV-VHD1EC/EE/F
302	EUR7615KB0	REMOTE CONTROLLER	[MAVD]
			NV-VHD1B
303	UR76EC1503A	BATTERY COVER	[MAVD]
304	VJA0728-A	RF CABLE	NV-VHD1B
304	VUA8015	RF CABLE	K1TWACB00005 NV-VHD1F
305	RJA0043-1C	AC CORD	[MAVD] ⚠
			NV-VHD1EC/EE/F
305	RJA0044-3C	AC CORD	[MAVD] ⚠
			NV-VHD1B
306	VPK2246	ACCESSORIES PACKING	[MAVD]
307	VPN5764	CUSHION (L)	[MAVD]

Ref. No.	Part No.	Part Name & Description	Remarks
308	VPN5765	CUSHION (R)	[MAVD]
309	VPG0P96	PACKING	[MAVD]
310	VJA1057	21PIN CABLE	NV-VHD1F
		SERVICE FIXTURES & TOOLS	
	VFJ8125H3F	VHS ALIGNMENT TAPE (PAL)	
	VFK0335	RETAINING RING REMOVER	
		(3mm/4mm)	
	VFK0329	POST ADJUSTMENT	
		SCREWDRIVER	
	VFK0326	HEX WRENCH SET	
	VFK0132	BACK TENSION METER	
	VFK27	HEAD CLEANING STICK	
	VFK1024	MOLYTONE GREASE	
	VFK0330	FINE ADJUSTMENT GEAR	
		DRIVER	
	VFK1301	SILICONE GREASE	
	VFK1298A	FLOIL GREASE	
	DVDT-S15	DVD TEST DISC	
	VFK1727	DVD UNIT ADJUSTMENT STAND 1	
	VFK1728	EXTENSION CABLE	
	VFK1730	EXTENSION CABLE	
	VFK1731	EXTENSION CABLE	
	VFK1732	EXTENSION CABLE	
	JGS0116	EXTENSION CABLE	
	RZZ0L01	SCREW LOCK	
	RFKXGAK152	GREASE 1	
	RFKXPG641	GREASE 2	
	RFKXGA1280	OIL (1)	
	PVCD-K06	CD/VCD TEST DISC	
	VFK1727	DVD UNIT ADJUSTMENT STAND 1	

18.5. ELECTRICAL PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE: Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS (uf), P=uuF.
4. The P.C. Board units marked width "▮" show below the main assembled parts.
5. The marking (RTL) indicaters the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.
6. " [MAV] " in the Remarks column shows that the parts is/are supplied from MAV.
7. " *1 ", " *2 ", " *3 ", *4 " in the Remarks column shows the models as follows.
" *1 ": NV-VHD1B-S
" *2 ": NV-VHD1EC-S
" *3 ": NV-VHD1EE-S
" *4 ": NV-VHD1F-S

Ref. No.	Part No.	Part Name & Description	Remarks
■	VEP01911A	POWER C.B.A.	(RTL)[MAVD]
■	VEP06E75B	MAIN C.B.A.	(RTL)[MAVD] *1
			THE FOLLOWING C.B.A IS
			INCLUDED IN MAIN C.B.A.
			VEP07A23T-SK
■	VEP06E75A	MAIN C.B.A.	(RTL)[MAVD] *2
			THE FOLLOWING C.B.A IS
			INCLUDED IN MAIN C.B.A.
			VEP07A23S-SK
■	VEP06E75D	MAIN C.B.A.	(RTL)[MAVD] *3
			THE FOLLOWING C.B.A IS
			INCLUDED IN MAIN C.B.A.
			VEP07A23U-SK
■	VEP06E75C	MAIN C.B.A.	(RTL)[MAVD] *4
			THE FOLLOWING C.B.A IS
			INCLUDED IN MAIN C.B.A.
			VEP07A47A-SK
■	VEP07A23T-SK	TV DEMODULATOR PACK C.B.A	(RTL)[MAVD] *1
			INCLUDED IN MAIN C.B.A.
			(VEP06E75B).
■	VEP07A23S-SK	TV DEMODULATOR PACK C.B.A	(RTL)[MAVD] *2
			INCLUDED IN MAIN C.B.A.
			(VEP06E75A).
■	VEP07A23U-SK	TV DEMODULATOR PACK C.B.A	(RTL)[MAVD] *3
			INCLUDED IN MAIN C.B.A.
			(VEP06E75D).
■	VEP07A47A-SK	TV DEMODULATOR PACK C.B.A	(RTL)[MAVD] *4
			INCLUDED IN MAIN C.B.A.
			(VEP06E75C).
■	VEP06E76A	DVD INTERFACE C.B.A.	(RTL)[MAVD]
■	VEP03G15A	AV DECODER C.B.A.	(RTL)[MAVD]
■	VEP04811A	FRONT JACK C.B.A.	(RTL)[MAVD]
■	VEP06E86A	FRONT SWITCH C.B.A.	(RTL)[MAVD]
■	REP3091A-1N	TERMINAL C.B.A.	(RTL)[MAVD]
■	----------	CYLINDER STATOR C.B.A.	INCLUDED IN
			CYLINDER STATOR UNIT

Ref. No.	Part No.	Part Name & Description	Remarks
			(VEM0715).
■	----------	CAPSTAN DRIVE C.B.A.	INCLUDED IN
			CAPSTAN UNIT (VEK9069).
■	VEP01911A	POWER C.B.A.	(RTL)[MAVD]
C1122	F1BAF1020020	CERAMIC CAPACITOR	[MAVD] ⚠
C1124	F1BAF1020020	CERAMIC CAPACITOR	[MAVD] ⚠
C1125	VCF2AAF683M	X2 CAPACITORS	[MAVD] ECQU2A683MVA ⚠
C1141	ECEC2GG680FZ	E.CAPACITOR 400V 68U	⚠
C1151	ECQB1H223JM3	P.CAPACITOR 50V 0.022U	[MAVD]
C1152	ECQB1H103JZ	P.CAPACITOR 50V 0.01U	
C1153	ECQV1H104JL3	P.CAPACITOR 50V 0.1U	
C1154	ECQB1H223JM3	P.CAPACITOR 50V 0.022U	[MAVD]
C1155	ECKN3A271KBP	C.CAPACITOR 1KV 270P	
C1200	ECQV1H104JL3	P.CAPACITOR 50V 0.1U	
C1210	F1B3A332A004	C.CAPACITOR 1KV 3300P	[MAVD]
C1230	F2A1H560A101	E.CAPACITOR 50V 56U	[MAVD]
C1240	EEUFG1A182B	E.CAPACITOR 10V 1800U	[MAVD]
C1241	VCEA1AEC221B	E.CAPACITOR 10V 220U	F2A1A2210012 [MAVD]
C1250	EEUFG1E821B	E.CAPACITOR 25V 820U	[MAVD]
C1251	F2A1E101A122	E.CAPACITOR 25V 100U	[MAVD] ECA1EM101B
C1260	EEUFG1A272E	E.CAPACITOR 10V 2700U	[MAVD]
C1261	VCEA1AEC221B	E.CAPACITOR 10V 220U	F2A1A2210012 [MAVD]
C1270	F2A1H560A101	E.CAPACITOR 50V 56U	[MAVD]
C1281	EEUFG1E181B	E.CAPACITOR 25V 180U	[MAVD] F2A1E1810001
C1282	EEUFG1V181B	E.CAPACITOR 35V 180U	[MAVD]
C1290	EEUFG1C391B	E.CAPACITOR 16V 390U	[MAVD]
C1291	VCEA1CEC101B	E.CAPACITOR 16V 100U	[MAVD]
			F2A1C1010033 ECA1CM101B
C1361	ECEA1VKA100B	E.CAPACITOR 35V 10U	
D1110	ERZVA5V471	SURGE ABSORBER	⚠
D1140	DF08S-6622	DIODE	B0KB00000013
D1152	MA2C18500E	DIODE	[MAVD] MA185TA5
D1155	MA2C165001VT	DIODE	MA165TA5VT
D1157	MAZ40360MF	DIODE	
D1180	MAZ751000C	DIODE	
D1210	AU01Z	DIODE	B0HAGM000006
D1230	MA2C18500E	DIODE	[MAVD] MA185TA5
D1240	11EQS04TA1	DIODE	[MAVD]
			B0JAME000025 B0JAME000037
D1241	11EQS04TA1	DIODE	[MAVD]
			B0JAME000025 B0JAME000037
D1250	B0JAMK000004	DIODE	[MAVD]
D1251	B0JAMK000004	DIODE	[MAVD]
D1260	B0JARE000014	DIODE	[MAVD]
D1261	B0JARE000014	DIODE	[MAVD]
D1270	MA2C18500E	DIODE	[MAVD] MA185TA5
D1280	11EQS04TA1	DIODE	[MAVD]
			B0JAME000025 B0JAME000037
D1281	11EQS04TA1	DIODE	[MAVD]
			B0JAME000025 B0JAME000037

Ref. No.	Part No.	Part Name & Description	Remarks
D1282	----------	JUMPER WIRE	
D1290	11EQS06TA1	DIODE	B0JAMG000010 B0EAKE000002
D1362	MAZ4220N0F	DIODE	[MAVD]
D1363	MA2C165001VT	DIODE	MA165TA5VT
D1364	MA2C165001VT	DIODE	MA165TA5VT
D1365	----------	JUMPER WIRE	
F1101	VSF0244C16	MINIATURE FUSE	K5D162BL0007 [MAVD] ⚠
IC1200	UPC1093J	IC	C0DAEMC00002 UPC1093J-T
IP1240	UNH000700A	IC PROTECTOR	UNH050700A ⚠
K1210	----------	JUMPER WIRE	
K1281	----------	JUMPER WIRE	
L1120	ELF15N005AB	LINE FILTER	[MAVD] ELF15N005A ⚠
L1121	ELF15N003AB	LINE FILTER	[MAVD] ELF15N003A ⚠
L1240	VLQ0775K220T	FIXED INDUCTOR	G0A220G00021 [MAVD]
L1250	VLQ0775K220T	FIXED INDUCTOR	G0A220G00021 [MAVD]
L1260	VLQ0775K220T	FIXED INDUCTOR	G0A220G00021 [MAVD]
L1290	VLQ0775K220T	FIXED INDUCTOR	G0A220G00021 [MAVD]
LB1214	J0JHC0000070	FILTER	[MAVD]
LB1216	J0JKB0000003	BEAD CORE	[MAVD] VLP0056-T
LB1217	J0JKB0000003	BEAD CORE	[MAVD] VLP0056-T
LB1218	J0JHC0000070	FILTER	[MAVD]
LR1150	J1ZZA0000001	FILTER	
P1101	K2AA2H000007	AC INLET	⚠
P1102	K1KA11B00035	CONNECTOR 11-PIN	[MAVD]
P1103	K1KA11B00035	CONNECTOR 11-PIN	[MAVD]
Q1150	B1DEDR000003	TRANSISTOR	B1DEFR000007
Q1151	2SD1992A-R	TRANSISTOR	2SD1992ARA
Q1152	2SC3311ASA	TRANSISTOR	
Q1153	B1DEDQ000014	TRANSISTOR	
Q1200	PC123ZY2	PHOTO COUPLER	B3PBA0000078 PC123ZY2 ⚠
R1150	ERDS2TJ105T	C.RESISTOR 1/4W 1M	
R1153	ERG2SJ331E	M.RESISTOR 2W 330	
R1154	ERDS2TJ105T	C.RESISTOR 1/4W 1M	
R1155	ERDS2FJ104	C.RESISTOR 1/4W 100K	
R1156	ERDS2FJ330	C.RESISTOR 1/4W 33	
R1157	ER0S2THF3901	M.RESISTOR 1/4W 3.9K	[MAVD]
R1158	ERDS2FJ331	C.RESISTOR 1/4W 330	
R1159	ERDS2FJ3R3	C.RESISTOR 1/4W 3.3	
R1160	ERX1SJR51E	M.RESISTOR 1W 0.51	[MAVD]
R1161	ERDS2FJ101	C.RESISTOR 1/4W 100	
R1162	ERDS2FJ102	C.RESISTOR 1/4W 1K	
R1163	ERDS2FJ101	C.RESISTOR 1/4W 100	
R1200	ERJ6GEYG393V	M.RESISTOR CH 1/10W 39K	
R1202	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	
R1203	ERJ6GEYG223V	M.RESISTOR CH 1/10W 22K	

Ref. No.	Part No.	Part Name & Description	Remarks
R1205	ERJ6GEYJ222V	M.RESISTOR CH 1/10W 2.2K	
R1206	ERJ6GEYJ271V	M.RESISTOR CH 1/10W 270	D0GD271JA003
R1209	ERJ6GEYG822V	M.RESISTOR CH 1/10W 8.2K	[MAVD]
R1210	ERJ6GEYG563V	M.RESISTOR CH 1/10W 56K	
R1230	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R1240	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R1282	ERDS2FJ180	C.RESISTOR 1/4W 18	
R1290	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
T1150	ETS29AS1J6AC	TRANSFORMER	[MAVD] ⚠
		MISCELLANEOUS	
	EYF52BC	FUSE HOLDER	
	EYF52BC	FUSE HOLDER	
	VMX0985	CURCUIT BOARD SPACER	
	VMX0985	CURCUIT BOARD SPACER	
■	VEP06E75B	MAIN C.B.A.	(RTL)[MAVD] *1
■	VEP06E75A	MAIN C.B.A.	(RTL)[MAVD] *2
■	VEP06E75D	MAIN C.B.A.	(RTL)[MAVD] *3
■	VEP06E75C	MAIN C.B.A.	(RTL)[MAVD] *4
C0701	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	*1,*2,*3 ECUV1C105ZFN
C0701	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0702	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	*1,*2,*3 ECUV1H102KBV
C0702	ECUV1H151JCN	C.CAPACITOR CH 50V 150P	*4 ECJ2VC1H151J
C0703	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	*1,*2,*3 ECUV1A105KBN
C0703	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0704	ECJ2VB1H333K	C.CAPACITOR CH 50V 0.033U	*1,*2,*3
C0704	ECUV1H270JCN	C.CAPACITOR CH 50V 27P	*4 ECJ2VC1H270J
C0705	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0706	ECJ2VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4
C0707	ECEA1HKS2R2	E.CAPACITOR 50V 2.2U	*1,*2,*3
C0707	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0708	ECEA1HKAR47B	E.CAPACITOR 50V 0.47U	*1,*2,*3
C0708	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0709	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0710	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C0711	ECEA1CKS220	E.CAPACITOR 16V 22U	*1,*2,*3
C0712	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	*1,*2,*3 ECUV1C104ZFV
C0712	ECJ2VF1C474Z	C.CAPACITOR CH 16V 0.47U	*4
C0713	ECEA0JKS331	E.CAPACITOR 6.3V 330U	*1,*2,*3
C0714	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	*1,*2,*3 ECUV1C105ZFN
C0714	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0715	ECJ1VC1H120J	C.CAPACITOR CH 50V 12P	*1 ECUV1H120JCV
C0715	ECJ1VC1H030C	C.CAPACITOR CH 50V 3P	*2,*3 ECUV1H030CCV
C0715	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0716	ECUV1H391JCV	C.CAPACITOR CH 50V 390P	*4 F1H1H391A004
C0717	ECUV1H330GUV	C.CAPACITOR CH 50V 33P	[MAVD] *1,*2,*3
			ECJ1VU1H330G
C0717	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0719	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	*1,*2,*3 ECUV1E104ZFV
C0719	ECJ2VF1C474Z	C.CAPACITOR CH 16V 0.47U	*4
C0720	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0721	ECUV1H820JCV	C.CAPACITOR CH 50V 82P	*1 ECJ1VC1H820J

Ref. No.	Part No.	Part Name & Description	Remarks
C0721	ECJ1VC1H121J	C.CAPACITOR CH 50V 120P	[MAVD] *2
C0721	ECJ1VC1H560J	C.CAPACITOR CH 50V 56P	*3 ECUV1H560JCV
C0721	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0722	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	*4 ECUV1H104ZFN
C0723	ECEA1CKS101	E.CAPACITOR 16V 100U	*4
C0724	ECUV1H331KBV	C.CAPACITOR CH 50V 330P	*1 ECJ1VB1H331K
C0724	ECJ1VB1H221K	C.CAPACITOR CH 50V 220P	*2,*3 ECUV1H221KBV
C0725	ECEA1HKS2R2	E.CAPACITOR 50V 2.2U	*4
C0726	ECJ1VB1H152K	C.CAPACITOR CH 50V 1500P	*4 ECUV1H152KBV
C0728	ECEA1HKS0R1	E.CAPACITOR 50V 0.1U	*4
C0729	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0730	ECEA1CKS220	E.CAPACITOR 16V 22U	*4
C0733	ECEA1HKAR22B	E.CAPACITOR 50V 0.22U	*4 ⚠
C0734	ECJ1VB1H152K	C.CAPACITOR CH 50V 1500P	*4 ECUV1H152KBV
C0735	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0738	ECUV1H390JCV	C.CAPACITOR CH 50V 39P	*4 ECJ1VC1H390J
C0739	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	*4 ECUV1H470JCV
C0740	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	*4 ERJ3GS0R00V
C0741	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C0742	ECJ1VC1H330J	C.CAPACITOR CH 50V 33P	[MAVD] *4 ECUV1H330JCV
C0743	ECUV1H180JCV	C.CAPACITOR CH 50V 18P	*4 ECJ1VC1H180J
C1002	ECEA1AKS470	E.CAPACITOR 10V 47U	
C1003	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C1006	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C1008	ECEA1AKS470	E.CAPACITOR 10V 47U	
C1010	ECEA1CKA470	E.CAPACITOR 16V 47U	
C1011	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C1202	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C1204	ECEA1AKS220	E.CAPACITOR 10V 22U	
C1206	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C1207	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C2501	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C2502	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C2505	ECJ1VB1C563K	C.CAPACITOR CH 16V 0.056U	ECUV1C563KBV
C2506	ECJ1VB1C563K	C.CAPACITOR CH 16V 0.056U	ECUV1C563KBV
C2507	ECJ1VB1C563K	C.CAPACITOR CH 16V 0.056U	ECUV1C563KBV
C2508	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C2509	ECJ1VF1C474Z	C.CAPACITOR CH 16V 0.47U	ECUV1C474ZFV
C2510	ECJ1VC1H330J	C.CAPACITOR CH 50V 33P	[MAVD] ECUV1H330JCV
C2511	ECEA0JKN220B	E.CAPACITOR 6.3V 22U	
C2512	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	
C2513	ECJ1VB1H392K	C.CAPACITOR CH 50V 3900P	ECUV1H392KBV
C2515	ECJ1VB1E223K	C.CAPACITOR CH 25V 0.022U	ECUV1E223KBV
C2516	ECJ1VB1E223K	C.CAPACITOR CH 25V 0.022U	ECUV1E223KBV
C2517	ECUV1A224KBV	C.CAPACITOR 10V 0.22U	F1H1A224A001
C2518	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C2519	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C2520	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C2521	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C2522	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C2523	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C2524	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C3002	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	ECUV1H102KBV
C3003	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	ECUV1H102KBV
C3004	ECEA1HKS010	E.CAPACITOR 50V 1U	
C3007	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	

Ref. No.	Part No.	Part Name & Description	Remarks
C3008	ECUV1H680JCV	C.CAPACITOR CH 50V 68P	
C3009	ECUV1H070DCV	C.CAPACITOR CH 50V 7P	ECJ1VC1H070D
C3012	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C3013	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C3015	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C3016	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C3017	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C3018	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C3019	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C3020	ECEA1HKS010	E.CAPACITOR 50V 1U	
C3021	ECJ1VB1H103K	C.CAPACITOR CH 50V 0.01U	ECUV1H103KBV
C3022	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C3023	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C3024	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C3025	ECJ1VB1H222K	C.CAPACITOR CH 50V 2200P	ECUV1H222KBV
C3026	ECEA1HKSR33	E.CAPACITOR 50V 0.33U	*4
C3027	ECEA1HKSR33	E.CAPACITOR 50V 0.33U	*3,*4
C3028	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C3029	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C3030	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C3031	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C3032	ECJ1VB1H222K	C.CAPACITOR CH 50V 2200P	ECUV1H222KBV
C3033	ECEA1HKAR47B	E.CAPACITOR 50V 0.47U	
C3035	ECEA1EKN4R7B	E.CAPACITOR 25V 4.7U	[MAVD]
C3036	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C3037	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C3038	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	
C3039	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C3040	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C3041	ECEA1AKS220	E.CAPACITOR 10V 22U	
C3042	ECJ1VB1E223K	C.CAPACITOR CH 25V 0.022U	ECUV1E223KBV
C3043	ECEA1CKS100	E.CAPACITOR 16V 10U	
C3045	ECJ1VC1H560J	C.CAPACITOR CH 50V 56P	*1,*2,*3 ECUV1H560JCV
C3045	ECJ1VC1H330J	C.CAPACITOR CH 50V 33P	[MAVD] *4 ECUV1H330JCV
C3046	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C3047	ECUV1H821JCV	C.CAPACITOR CH 50V 820P	
C3048	ECUV1H221JCV	C.CAPACITOR CH 50V 220P	ECJ1VC1H221J
C3050	ECEA1AKS220	E.CAPACITOR 10V 22U	
C3051	ECUV1H681JCV	C.CAPACITOR CH 50V 680P	ECJ1VC1H681J
C3052	ECUV1H820JCV	C.CAPACITOR CH 50V 82P	ECJ1VC1H820J
C3053	ECUV1H680JCV	C.CAPACITOR CH 50V 68P	
C3054	ECUV1H680JCV	C.CAPACITOR CH 50V 68P	
C3501	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C3502	ECJ1VB1H103K	C.CAPACITOR CH 50V 0.01U	ECUV1H103KBV
C3503	ECJ1VB1H103K	C.CAPACITOR CH 50V 0.01U	ECUV1H103KBV
C3505	ECJ1VB1H103K	C.CAPACITOR CH 50V 0.01U	ECUV1H103KBV
C3506	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C3507	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C3508	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C3509	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C3510	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C3511	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4001	ECUV1H222JCN	C.CAPACITOR 50V 2200P	[MAVD] F1J1H2220008
C4002	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4003	ECQB1H822JM3	P.CAPACITOR 50V 8200P	[MAVD]
C4004	ECEA1AKS220	E.CAPACITOR 10V 22U	
C4005	ECEA1HKS010	E.CAPACITOR 50V 1U	

Ref. No.	Part No.	Part Name & Description	Remarks
C4006	ECJ1VB1H272K	C.CAPACITOR CH 50V 2700P	ECUV1H272KBV
C4007	ECUV1H122JCN	C.CAPACITOR CH 50V 1200P	ECJ2VC1H122J
C4008	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	
C4009	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	ECUV1C105ZFN
C4010	ECUV1E273KBV	C.CAPACITOR CH 25V 0.027U	
C4011	ECJ1VB1H153K	C.CAPACITOR CH 50V 0.015U	*1,*2,*4 ECUV1H153KBV
C4011	ECJ1VB1H682K	C.CAPACITOR CH 50V 6800P	*3 ECUV1H682KBV
C4012	ECJ1VB1H822K	C.CAPACITOR CH 50V 8200P	*3 ECUV1H822KBV
C4013	ECJ1VB1H153K	C.CAPACITOR CH 50V 0.015U	*1,*2,*4 ECUV1H153KBV
C4013	ECJ1VB1E223K	C.CAPACITOR CH 25V 0.022U	*3 ECUV1E223KBV
C4014	ECEA1HKS010	E.CAPACITOR 50V 1U	
C4015	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C4016	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4017	ECEA1AKS220	E.CAPACITOR 10V 22U	
C4018	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4019	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C4020	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C4026	ECEA1AKS220	E.CAPACITOR 10V 22U	
C4027	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4028	ECJ1VB1E223K	C.CAPACITOR CH 25V 0.022U	ECUV1E223KBV
C4029	ECJ1VB1H152K	C.CAPACITOR CH 50V 1500P	ECUV1H152KBV
C4030	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C4031	ECQB1H223JM3	P.CAPACITOR 50V 0.022U	[MAVD]
C4032	ECUV1H681JCV	C.CAPACITOR CH 50V 680P	ECJ1VC1H681J
C4033	ECJ1VC1H101J	C.CAPACITOR CH 50V 100P	ECUV1H101JCV
C4035	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4036	ECJ1VB1H222K	C.CAPACITOR CH 50V 2200P	ECUV1H222KBV
C4501	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4502	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4503	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4504	ECQB1H473JM3	P.CAPACITOR 50V 0.047U	
C4505	ECEA1AKS330	E.CAPACITOR 10V 33U	
C4506	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4507	ECEA1CKS220	E.CAPACITOR 16V 22U	
C4508	ECQB1H153JM3	P.CAPACITOR 50V 0.015U	
C4509	ECJ1VF1H333Z	C.CAPACITOR CH 50V 0.033U	ECUV1H333ZFV
C4510	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C4511	ECJ1VC1H151J	C.CAPACITOR CH 50V 150P	ECUV1H151JCV
C4512	ECJ1VC1H151J	C.CAPACITOR CH 50V 150P	ECUV1H151JCV
C4513	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C4514	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C4515	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C4516	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C4517	ECJ1VC1H101J	C.CAPACITOR CH 50V 100P	ECUV1H101JCV
C4518	ECJ2VB1C224K	C.CAPACITOR CH 16V 0.22U	ECUV1C224KBN
C4519	ECQB1H153JM3	P.CAPACITOR 50V 0.015U	
C4520	ECEA1CKS220	E.CAPACITOR 16V 22U	
C4521	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4522	ECQB1H473JM3	P.CAPACITOR 50V 0.047U	
C4523	ECEA1AKS330	E.CAPACITOR 10V 33U	
C4528	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4529	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4530	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4533	ECEA1CKS100	E.CAPACITOR 16V 10U	*1,*2,*3
C4534	ECEA1AKS220	E.CAPACITOR 10V 22U	*1,*2,*3
C4537	ECJ1VB1H103K	C.CAPACITOR CH 50V 0.01U	ECUV1H103KBV
C4538	ECEA1CKA470	E.CAPACITOR 16V 47U	

Ref. No.	Part No.	Part Name & Description	Remarks
C4539	ECUV1H180JCV	C.CAPACITOR CH 50V 18P	ECJ1VC1H180J
C4541	ECEA1AKS470	E.CAPACITOR 10V 47U	
C4542	ECJ1VB1H103K	C.CAPACITOR CH 50V 0.01U	ECUV1H103KBV
C4543	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4544	ECUV1C333KBV	C.CAPACITOR CH 16V 0.033U	ECJ1VB1C333K
C4546	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4548	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4549	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C4550	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4551	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4552	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4553	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4554	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C4555	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4556	ECEA1CKS100	E.CAPACITOR 16V 10U	
C4557	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4558	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4901	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4902	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4903	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4904	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4905	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4906	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4907	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C4908	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C4909	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C4910	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C4911	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4912	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4913	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4914	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4915	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4916	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4917	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	ECUV1C105ZFN
C4918	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C4919	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4920	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C4921	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C4922	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	ECUV1C105ZFN
C4923	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C4924	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	ECUV1C105ZFN
C4925	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C4926	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C4927	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C4928	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4929	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4931	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	ECUV1C105ZFN
C4932	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	ECUV1C105ZFN
C4933	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	ECUV1C105ZFN
C4937	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4941	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C4942	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C4943	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C4944	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C4945	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C4946	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV
C4947	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	ECUV1H471KBV

Ref. No.	Part No.	Part Name & Description	Remarks
C4948	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	ECUV1C105ZFN
C4949	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C5501	ECJ1VC1H120J	C.CAPACITOR CH 50V 12P	*4 ECUV1H120JCV
C5502	ECJ1VC1H121J	C.CAPACITOR CH 50V 120P	[MAVD] *4
C5503	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	*4 ECUV1H470JCV
C5504	ECJ1VC1H220J	C.CAPACITOR CH 50V 22P	*4 ECUV1H220JCV
C5505	ECUV1H221JCV	C.CAPACITOR CH 50V 220P	*4 ECJ1VC1H221J
C5506	ECEA1HKS2R2	E.CAPACITOR 50V 2.2U	*4
C5507	ECEA0JKS101	E.CAPACITOR 6.3V 100U	*4
C5508	ECJ1VB1H222K	C.CAPACITOR CH 50V 2200P	*4 ECUV1H222KBV
C5509	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C5510	ECJ1VB1H222K	C.CAPACITOR CH 50V 2200P	*4 ECUV1H222KBV
C5511	ECJ1VC1H151J	C.CAPACITOR CH 50V 150P	*4 ECUV1H151JCV
C5512	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C5513	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	*4 ECUV1C104ZFV
C5514	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C5515	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C5516	ECEA1HKS010	E.CAPACITOR 50V 1U	*4
C5517	ECJ1VB1E223K	C.CAPACITOR CH 25V 0.022U	*4 ECUV1E223KBV
C5518	ECUV1H221JCV	C.CAPACITOR CH 50V 220P	*4 ECJ1VC1H221J
C5519	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	*4 ECUV1C104ZFV
C5520	ECUV1H681JCV	C.CAPACITOR CH 50V 680P	*4 ECJ1VC1H681J
C5521	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	*4 ECUV1H103ZFV
C5522	ECEA1CKS100	E.CAPACITOR 16V 10U	*4
C5523	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	*4 ECUV1H102KBV
C5524	ECEA1HKAR47B	E.CAPACITOR 50V 0.47U	*4
C5525	ECJ1VC1H121J	C.CAPACITOR CH 50V 120P	[MAVD] *4
C5526	ECJ1VC1H121J	C.CAPACITOR CH 50V 120P	[MAVD] *4
C6001	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C6002	ECJ1VC1H151J	C.CAPACITOR CH 50V 150P	ECUV1H151JCV
C6003	ECUV1H471JCV	C.CAPACITOR CH 50V 470P	ECJ1VC1H471J
C6004	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C6005	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C6007	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
C6008	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	ECUV1H102KBV
C6009	ECUV1H180JCV	C.CAPACITOR CH 50V 18P	ECJ1VC1H180J
C6010	ECUV1H180JCV	C.CAPACITOR CH 50V 18P	ECJ1VC1H180J
C6011	ECUV1H180JCV	C.CAPACITOR CH 50V 18P	ECJ1VC1H180J
C6012	ECJ1VC1H150J	C.CAPACITOR CH 50V 15P	ECUV1H150JCV
C6013	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C6014	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	ECUV1H102KBV
C6015	ECEA1CKS100	E.CAPACITOR 16V 10U	
C6017	ECUV1H681JCV	C.CAPACITOR CH 50V 680P	ECJ1VC1H681J
C6022	ERJ3GEYJ473V	M.RESISTOR CH 1/16W 47K	*1,*2
			ERJ3GSJ473V D0GB473JA002
C6023	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C6024	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C7301	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C7302	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C7303	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C7304	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C7305	ECJ1VC1H330J	C.CAPACITOR CH 50V 33P	[MAVD] ECUV1H330JCV
C7306	ECJ1VC1H330J	C.CAPACITOR CH 50V 33P	[MAVD] ECUV1H330JCV
C7307	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
C7311	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C7312	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C7314	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV

Ref. No.	Part No.	Part Name & Description	Remarks
C7315	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C7316	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C7318	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C7319	ECEA1CKS100	E.CAPACITOR 16V 10U	
C7320	ECEA1CKS100	E.CAPACITOR 16V 10U	
C7323	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C7324	ECJ1VB1H152K	C.CAPACITOR CH 50V 1500P	*1,*2,*3 ECUV1H152KBV
C7325	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C7326	ECEA1CKS100	E.CAPACITOR 16V 10U	
C7328	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C7331	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	ECUV1C105ZFN
C7341	ECJ1VB1H472K	C.CAPACITOR CH 50V 4700P	ECUV1H472KBV
C7342	ECJ1VB1H472K	C.CAPACITOR CH 50V 4700P	ECUV1H472KBV
C7501	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C7502	ECEA1HKS100	E.CAPACITOR 50V 10U	
C7503	ECJ1VC1H120J	C.CAPACITOR CH 50V 12P	ECUV1H120JCV
C7504	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C7507	VCE0073-T	GOLD CAPACITOR 0.047F	F4D55473A005
C7508	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C7509	ECUV1C683ZFV	C.CAPACITOR 16V 0.068U	[MAVD] F1H1C683A008
C7510	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C7511	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C7603	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C7604	ECEA0JKS101	E.CAPACITOR 6.3V 100U	*1,*2,*3
C7607	ECJ1VB1H221K	C.CAPACITOR CH 50V 220P	ECUV1H221KBV
C7608	ECJ1VB1H221K	C.CAPACITOR CH 50V 220P	ECUV1H221KBV
C7610	ECEA1HKS010	E.CAPACITOR 50V 1U	
C7611	ECUV1H221JCN	C.CAPACITOR CH 50V 220P	ECJ2VC1H221J
C7612	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C7613	ECJ1VB1E223K	C.CAPACITOR CH 25V 0.022U	ECUV1E223KBV
C7614	ECJ1VC1H330J	C.CAPACITOR CH 50V 33P	[MAVD] ECUV1H330JCV
C7615	ECJ1VC1H330J	C.CAPACITOR CH 50V 33P	[MAVD] ECUV1H330JCV
C7616	ECEA0JKS101	E.CAPACITOR 6.3V 100U	
C7617	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C7620	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C7622	ECJ1VB1H222K	C.CAPACITOR CH 50V 2200P	ECUV1H222KBV
C7623	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C7625	ECJ1VC1H560J	C.CAPACITOR CH 50V 56P	*1,*2,*3 ECUV1H560JCV
C7626	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	*1,*2,*3 ECUV1E104ZFV
C7701	ECJ1VC1H151J	C.CAPACITOR CH 50V 150P	ECUV1H151JCV
C7702	ECJ2VF1C474Z	C.CAPACITOR CH 16V 0.47U	
C7703	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C7704	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C7705	ECJ1VB1H222K	C.CAPACITOR CH 50V 2200P	ECUV1H222KBV
C7706	ECUV1C333KBV	C.CAPACITOR CH 16V 0.033U	ECJ1VB1C333K
C7707	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
C7708	ECUV1H221JCV	C.CAPACITOR CH 50V 220P	ECJ1VC1H221J
C7709	ECUV1H221JCV	C.CAPACITOR CH 50V 220P	ECJ1VC1H221J
C7710	ECJ1VC1H330J	C.CAPACITOR CH 50V 33P	[MAVD] *3,*4 ECUV1H330JCV
C7711	ECUV1H221JCV	C.CAPACITOR CH 50V 220P	ECJ1VC1H221J
C7712	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	ECUV1C105ZFN
C7713	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C7714	ECUV1H100DCV	C.CAPACITOR CH 50V 10P	ECJ1VC1H100D
D0701	MA80WA-TX	DIODE	[MAVD] *4 MA3Z080D0L
D0702	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	*1,*2,*3 D0GBR00JA017
D0703	MA80WK-TX	DIODE	[MAVD] *4 MA3Z080E0L

Ref. No.	Part No.	Part Name & Description	Remarks
D1003	MA4051N-H	DIODE	[MAVD] MAZ4051NHF
D1005	----------	JUMPER WIRE	
D1006	MA4051N-M	DIODE	[MAVD] MAZ4051NMF
D1007	MA2C165001VT	DIODE	MA165TA5VT
D1008	MA4130N-L	DIODE	[MAVD] MAZ4130NLF
D1012	----------	JUMPER WIRE	
D1013	MA2C165001VT	DIODE	MA165TA5VT
D1201	MA4051N-M	DIODE	[MAVD] MAZ4051NMF
D1202	MA2C165001VT	DIODE	MA165TA5VT
D1501	SIR505S	DIODE	SIR505STA47 B3EA00000040
D2501	MA2C165001VT	DIODE	MA165TA5VT
D2502	MA2C165001VT	DIODE	MA165TA5VT
D2503	----------	JUMPER WIRE	
D2504	----------	JUMPER WIRE	
D3001	MA2C165001VT	DIODE	MA165TA5VT
D4502	MA2C165001VT	DIODE	MA165TA5VT
D4503	MA4056N-H	DIODE	[MAVD] MAZ4056NHF
D4504	MA2C165001VT	DIODE	MA165TA5VT
D4901	MA4051N-M	DIODE	[MAVD] MAZ4051NMF
D4902	MA4051N-M	DIODE	[MAVD] MAZ4051NMF
D4903	MA2C165001VT	DIODE	MA165TA5VT
D4904	MA2C165001VT	DIODE	MA165TA5VT
D4905	MA2C165001VT	DIODE	MA165TA5VT
D7301	MA2C165001VT	DIODE	MA165TA5VT
D7503	B0JACE000001	DIODE	RB441PT-77
D7601	MA4300M	DIODE	MA4300-MTA MAZ43000M
D7701	MA2C165001VT	DIODE	MA165TA5VT
DP7501	A2BD00000057	DISPLAY TUBE	[MAVD]
FL7301	VLF0633-T	EMI-FILTER	[MAVD] J0HACK000009
IC0701	LA75503	IC	*1,*2,*3 C1AA00000606
IC0701	C1AB00001598	IC	[MAVD] *4
IC1001	C0DAEZG00010	REGULATOR IC	C0DAEZG00009
IC1002	C0CBCBD00002	REGULATOR	
IC1003	C0CBCHG00003	REGULATOR	C0CBCHG00001
IC1501	RPI354N	IC	B3EZ00000001
IC1502	RPI354N	IC	B3EZ00000001
IC2501	C1AB00001331	INTEGRATED CIRCUIT	[MAVD] C1AB00001332
IC3001	AN3531NFBS	IC	
IC3501	AN3368SB	INTEGRATED CIRCUIT	
IC4001	C0FBBK000030	2CH DAC	
IC4002	NJM4558M-TE1	OPERATION AMP	[MAVD] C0ABBB000109
IC4501	AN3656NFBPBV	IC	
IC4502	NJM4558M	IC	C0ABBB000044
IC4503	HCF4053BM1	INTEGRATED CIRCUIT	[MAVD]
IC4901	LA73021M	IC	C1AB00000933
IC4902	MM1508XNRE	INTEGRATED CIRCUIT	[MAVD]
IC4903	MM1508XNRE	INTEGRATED CIRCUIT	[MAVD]
IC4904	MM1508XNRE	INTEGRATED CIRCUIT	[MAVD]
IC4905	B3RAE0000023	OPTICAL OUT	GP1FA501TZ
IC5501	LA7337	INTEGRATED CIRCUIT	*4 C1AA00000502
IC6001	C2CBJG000239	INTEGRATED CIRCUIT	[MAVD] M37970VXMM
IC6002	TC7S32FU	IC	C0JBAE000087
IC7301	TDA9874AH	INTEGRATED CIRCUIT	C1AB00001404
IC7501	M35502AFP	INTEGRATED CIRCUIT	C0HBB0000023

Ref. No.	Part No.	Part Name & Description	Remarks
IC7503	C0EBE0000120	IC	
IC7504	PST7043-MT	INTEGRATED CIRCUIT	C0EAH0000059
IC7701	C1AB00001293	IC	[MAVD] SDA5650X
IC7702	M24C16-WBN6	IC	C3EAGC000015
IP1001	----------	JUMPER WIRE	
IP1002	----------	JUMPER WIRE	
IP1003	----------	JUMPER WIRE	
IP1004	----------	JUMPER WIRE	
JK4901	K2HA304B0002	LINE OUT TERMINAL	[MAVD]
JK4902	K2HZ242B0001	SCART CONNECTOR	[MAVD]
JK4903	VJJ0544	SVHS CONNECTOR	K1CB104B0017
JK4904	K2HA408B0050	RCA JACK BOARD 4P	[MAVD]
K0701	ECJ1VC1H560J	C.CAPACITOR CH 50V 56P	*2 ECUV1H560JCV
K0703	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	*1,*2,*3 ERJ3GS0R00V
K0707	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	*1,*2,*3 ERJ3GS0R00V
K0709	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	*1,*2,*3 ERJ3GS0R00V
K1002	----------	JUMPER WIRE	
K1003	----------	JUMPER WIRE	
K1004	----------	JUMPER WIRE	
K1005	----------	JUMPER WIRE	
K1007	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	*1 D0GBR00JA017
K3003	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	*1,*2,*3 D0GBR00JA017
K3501	----------	JUMPER WIRE	
K3502	----------	JUMPER WIRE	
K3503	----------	JUMPER WIRE	
K4002	----------	JUMPER WIRE	
K4003	----------	JUMPER WIRE	
K4502	----------	JUMPER WIRE	
K4901	----------	JUMPER WIRE	
K6002	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
K7301	----------	JUMPER WIRE	
K7302	----------	JUMPER WIRE	
K7303	----------	JUMPER WIRE	
K7304	----------	JUMPER WIRE	
K7306	----------	JUMPER WIRE	
K7307	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
K7601	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	*1,*2,*3 D0GBR00JA017
K7602	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	*1,*2,*3 D0GBR00JA017
K7603	----------	JUMPER WIRE	*4
K7604	----------	JUMPER WIRE	*4
K7701	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
L0701	ELJNAR22JF	CHIP INDUCTOR 0.22UH	*1
L0701	ELJNAR27JF	CHIP INDUCTOR 0.27UH	*2,*3
L0702	ELJNAR18JF	CHIP INDUCTOR 0.18UH	*4
L0703	ELJNA1R8JF	CHIP INDUCTOR 1.8UH	*1
L0703	ELJNA2R2JF	CHIP INDUCTOR 2.2UH	*2,*3
L0703	ELJNAR68JF	CHIP INDUCTOR 0.68UH	[MAVD] *4
L0704	ELJFA151KF	CHIP INDUCTOR 150UH	[MAVD] *4
L0705	ELJFA151KF	CHIP INDUCTOR 150UH	[MAVD] *4
L0706	ELJFA151KF	CHIP INDUCTOR 150UH	[MAVD] *4
L0707	ELJFA151KF	CHIP INDUCTOR 150UH	[MAVD] *4
L2501	VLQ0599J680T	INDUCTOR	[MAVD] G0C680JA0019
L3002	G0C220JA0019	INDUCTOR	VLQ0599J220T

Ref. No.	Part No.	Part Name & Description	Remarks
L3005	VLQ0599J470T	INDUCTOR	[MAVD] G0C470JA0019
L3006	G0C101JA0019	INDUCTOR	VLQ0599J101T
L3007	VLQ0599J680T	INDUCTOR	[MAVD] G0C680JA0019
L3008	G0C101JA0019	INDUCTOR	VLQ0599J101T
L3009	G0C330JA0019	INDUCTOR	VLQ0599J330T
L3010	VLQ0599J470T	INDUCTOR	[MAVD] G0C470JA0019
L3011	VLQ0599J390T	CHOKE COIL AXIAL	[MAVD] G0C390JA0019
L3012	VLQ0599J560T	CHOKE COIL AXIAL	[MAVD] G0C560JA0019
L3501	G0C330JA0019	INDUCTOR	VLQ0599J330T
L4001	ELELN153JA	INDUCTOR 15000UH	
L4003	VLQ0599J680T	INDUCTOR	[MAVD] G0C680JA0019
L4501	----------	JUMPER WIRE	
L4502	VLQ0599J1R2T	CHOKE COIL AXIAL	[MAVD] G0C1R2J00004
L4504	VLQ0599J181T	CHOKE COIL AXIAL	[MAVD] G0C181JA0019
L4901	VLQ0599JR22T	CHOKE COIL AXIAL	[MAVD] G0CR22JA0019
L4902	VLQ0599J680T	INDUCTOR	[MAVD] G0C680JA0019
L4903	VLQ0599J680T	INDUCTOR	[MAVD] G0C680JA0019
L4904	----------	JUMPER WIRE	
L4906	VLQ0599J680T	INDUCTOR	[MAVD] G0C680JA0019
L5501	VLQ0599J121T	CHOKE COIL AXIAL	[MAVD] *4 G0C121JA0019
L5502	VLQ0599J121T	CHOKE COIL AXIAL	[MAVD] *4 G0C121JA0019
L5503	G0C100JA0019	INDUCTOR	*4 VLQ0599J100T
L5504	VLQ0599J6R8	CHOKE COIL AXIAL	*4 G0C6R8JA0026
L5505	VLQ0599J270T	CHOKE COIL AXIAL	[MAVD] *4 G0C270JA0019
L5506	VLQ0599J271T	CHOKE COIL AXIAL	[MAVD] *4 G0C271JA0019
L5507	VLQ0599J271T	CHOKE COIL AXIAL	[MAVD] *4 G0C271JA0019
L6001	G0C101JA0019	INDUCTOR	VLQ0599J101T
L7301	G0C1R0JA0019	INDUCTOR	VLQ0599J1R0T
L7601	G0C330JA0019	INDUCTOR	*1,*2,*3 VLQ0599J330T
L7602	VLQ0599J270T	CHOKE COIL AXIAL	[MAVD] *1,*2,*3
			G0C270JA0019
L7602	VLQ0599J390T	CHOKE COIL AXIAL	[MAVD] *4 G0C390JA0019
L7603	----------	JUMPER WIRE	*1,*2,*3
L7604	VLQ0599J2R2T	CHOKE COIL AXIAL	[MAVD] G0C2R2JA0019
L7605	VLQ0599J390T	CHOKE COIL AXIAL	[MAVD] *1,*2,*3
			G0C390JA0019
L7605	----------	JUMPER WIRE	*4
L7608	VLQ0599J2R2T	CHOKE COIL AXIAL	[MAVD] G0C2R2JA0019
L7609	----------	JUMPER WIRE	*1,*2,*3
L7701	VLQ0599J680T	INDUCTOR	[MAVD] G0C680JA0019
L7702	G0C330JA0019	INDUCTOR	*3,*4 VLQ0599J330T
L7703	VLQ0599J680T	INDUCTOR	[MAVD] G0C680JA0019
LB0701	J0JBC0000041	FILTER	*3 VLP0147-T
LB3001	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB3002	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB3003	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB3004	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB3005	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB3006	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB3008	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB3009	VLP0323A601R	BEAD CORE	J0JCC0000062
LB3010	VLP0323A601R	BEAD CORE	J0JCC0000062
LB3011	VLP0323A601R	BEAD CORE	J0JCC0000062
LB3012	VLP0323A601R	BEAD CORE	J0JCC0000062
LB3013	VLP0323A601R	BEAD CORE	J0JCC0000062
LB3501	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017

Ref. No.	Part No.	Part Name & Description	Remarks
LB3502	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
LB3503	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
LB3504	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
LB4001	----------	JUMPER WIRE	
LB4901	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
LB4902	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
LB4903	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
LB4904	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
LB4905	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
LB4906	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
LB4909	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
LB4910	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
LB4911	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
LB7301	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
LB7302	VLP0304	BEAD CORE	BLM21AH102SN1 J0JCC0000064
LB7602	----------	JUMPER WIRE	
P1001	K1KB11B00015	CONNECTOR 11-PIN	[MAVD]
P1501	VJS3837A002	CONNECTOR	K1KB02A00035
P2501	VJP3835E012	CONNECTOR	[MAVD] K1KA12A00127
P2502	K1MN09A00023	CONNECTOR 9-PIN	[MAVD]
P3502	K1MN10A00037	CONNECTOR 10-PIN	[MAVD]
P4002	VJS3837A002	CONNECTOR	K1KB02A00035
P4003	K1MN06A00035	CONNECTOR 6-PIN	[MAVD]
P4301	VJS4357E019B	CONNECTOR	[MAVD] K1KB19A00011
P30001	K1KB11B00015	CONNECTOR 11-PIN	[MAVD] *3
P30002	VJP4357B019B	CONNECTOR	*3 K1KA19Z00001
P30003	K1KA22A00044	CONNECTOR 22-PIN	*3
P30004	K1KA22A00044	CONNECTOR 22-PIN	*3
P30005	TJS1A8780	2P CONNECTOR	*3 RJP2G18ZA K1KA02A00229
PK0701	VJR0826E009W	CONNECTOR 9-PIN	K1MR09A00028
PP0701	VJP3589E004B	CONNECTOR	K1KA04B00135
PS1005	K1KB06B00033	CONNECTOR 6-PIN	
PS7501	K1KB06B00033	CONNECTOR 6-PIN	
PS7502	K1KB10B00045	CONNECTOR 10-PIN	
Q0702	2SD0601ASL	TRANSISTOR	[MAVD]
Q0703	2SB0709ARL	TRANSISTOR	*4 2SB709A-RTX
Q1002	2SD602A-R	TRANSISTOR	2SD0602ARL
Q1003	2SC1959-Y	TRANSISTOR	B1AAGD000006
Q1004	2SC1959-Y	TRANSISTOR	B1AAGD000006
Q1005	2SD602A-R	TRANSISTOR	2SD0602ARL
Q1006	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q1007	2SC1959-Y	TRANSISTOR	B1AAGD000006
Q1008	2SB710A-R	TRANSISTOR	*2,*3,*4 2SB0710ARL
Q1201	2SC1959-Y	TRANSISTOR	B1AAGD000006
Q1202	2SC1959-Y	TRANSISTOR	B1AAGD000006
Q1203	2SC1959-Y	TRANSISTOR	B1AAGD000006
Q1501	PNB2301MBV	TRANSISTOR	
Q1502	PNB2301MAV	TRANSISTOR	
Q3001	2SD0601ARN	TRANSISTOR	[MAVD] *4 2SD601A-RTX
Q4001	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q4002	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q4005	2SB710A-R	TRANSISTOR	2SB0710ARL

Ref. No.	Part No.	Part Name & Description	Remarks
Q4006	2SD602A-R	TRANSISTOR	2SD0602ARL
Q4501	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q4901	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q4903	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q4904	2SB0709ARL	TRANSISTOR	2SB709A-RTX
Q4905	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q4906	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q4907	2SB0709ARL	TRANSISTOR	2SB709A-RTX
Q5501	2SD0601ARN	TRANSISTOR	[MAVD] *4 2SD601A-RTX
Q5502	2SD0601ARN	TRANSISTOR	[MAVD] *4 2SD601A-RTX
Q5503	2SD0601ARN	TRANSISTOR	[MAVD] *4 2SD601A-RTX
Q5504	2SB0709ARL	TRANSISTOR	*4 2SB709A-RTX
Q5505	2SD0601ARN	TRANSISTOR	[MAVD] *4 2SD601A-RTX
Q6001	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q7702	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q7703	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q7704	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q7705	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q7707	2SB0709ARL	TRANSISTOR	*3,*4 2SB709A-RTX
Q7708	2SB0709ARL	TRANSISTOR	2SB709A-RTX
QR0702	DTC363EK-T96	DIGITAL TRANSISTOR	[MAVD] *4 B1GBHBHH0002
QR1001	UNR211200L	TRANSISTOR RESISTOR	[MAVD]
QR1002	UNR221100L	TRANSISTOR RESISTOR	*2,*3,*4 UN2211-TX
QR1201	B1GBCFLL0002	TRANSISTOR	[MAVD] DTC124EK-T146
QR3004	UNR221300L	TRANSISTOR RESISTOR	*4
QR3501	B1GBCFLL0002	TRANSISTOR	[MAVD] DTC124EK-T146
QR3502	B1GBCFLL0002	TRANSISTOR	[MAVD] DTC124EK-T146
QR4001	B1GBCFLL0002	TRANSISTOR	[MAVD] DTC124EK-T146
QR4002	UNR221100L	TRANSISTOR RESISTOR	UN2211-TX
QR4003	B1GDCFJJ0002	TRANSISTOR	[MAVD] DTA114EK-T146
QR4005	UN2113	TRANSISTOR	UNR211300L
QR4008	DTC114TK-T96	TRANSISTOR	[MAVD]
			DTC114TK-T146 B1GBCFJA0002
QR4009	DTC114TK-T96	TRANSISTOR	[MAVD]
			DTC114TK-T146 B1GBCFJA0002
QR4501	DTC143TK-T96	TRANSISTOR	[MAVD]
			DTC143TK-T146 B1GBCFGA0002
QR4502	DTC143TK-T96	TRANSISTOR	[MAVD]
			DTC143TK-T146 B1GBCFGA0002
QR4503	DTC143TK-T96	TRANSISTOR	[MAVD]
			DTC143TK-T146 B1GBCFGA0002
QR4504	DTC143TK-T96	TRANSISTOR	[MAVD]
			DTC143TK-T146 B1GBCFGA0002
QR4505	UN2113	TRANSISTOR	*1,*2,*3 UNR211300L
QR4506	DTC143TK-T96	TRANSISTOR	[MAVD] *1,*2,*3
			DTC143TK-T146 B1GBCFGA0002
QR4507	UNR221100L	TRANSISTOR RESISTOR	UN2211-TX
QR4509	UN2113	TRANSISTOR	UNR211300L
QR4510	UNR221300L	TRANSISTOR RESISTOR	
QR4902	B1GBCFLL0002	TRANSISTOR	[MAVD] DTC124EK-T146
QR4903	UN2214	TRANSISTOR	UNR221400L
QR4904	DTC114TK-T96	TRANSISTOR	[MAVD]
			DTC114TK-T146 B1GBCFJA0002
QR4905	DTC114TK-T96	TRANSISTOR	[MAVD]
			DTC114TK-T146 B1GBCFJA0002
QR4906	UN2214	TRANSISTOR	UNR221400L

Ref. No.	Part No.	Part Name & Description	Remarks
QR5501	UNR221100L	TRANSISTOR RESISTOR	*4 UN2211-TX
QR5502	UN2113	TRANSISTOR	*4 UNR211300L
QR6001	DTC114TK-T96	TRANSISTOR	[MAVD] B1GBCFJA0002
QR6003	UNR221100L	TRANSISTOR RESISTOR	UN2211-TX
QR7502	B1GBCFLL0002	TRANSISTOR	[MAVD] DTC124EK-T146
R0701	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	*1
R0705	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	*1,*2,*3 ERJ3GSJ472V
R0706	ERJ3GEYJ223V	M.RESISTOR CH 1/16W 22K	*4
			ERJ3GSJ223V D0GB223JA002
R0707	ERJ3GEYJ393V	M.RESISTOR CH 1/16W 39K	*1,*2,*3
			ERJ3GSJ393V D0GB393JA002
R0707	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	*4
R0708	ERJ3GEYJ332V	M.RESISTOR CH 1/16W 3.3K	*1,*2,*3
			ERJ3GSJ332V D0GB332JA002
R0708	ERJ6GEYJ562V	M.RESISTOR CH 1/10W 5.6K	*4
R0709	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	*3
R0709	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	*4
R0710	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	*4
R0711	ERJ3GEYJ181V	M.RESISTOR CH 1/16W 180	*1,*2,*3
R0711	ERJ3GEYJ562V	M.RESISTOR CH 1/16W 5.6K	*4
			ERJ3GSJ562V D0GB562JA002
R0713	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	*1,*2,*3 ERJ3GS0R00V
R0713	ERJ3GEYG181V	M.RESISTOR CH 1/16W 180	[MAVD] *4
R0714	ERJ3GEYJ562V	M.RESISTOR CH 1/16W 5.6K	*3
			ERJ3GSJ562V D0GB562JA002
R0715	ERJ3GEYJ223V	M.RESISTOR CH 1/16W 22K	*1,*2,*3
			ERJ3GSJ223V D0GB223JA002
R0717	ERJ3GEYJ471V	M.RESISTOR CH 1/16W 470	*1,*2,*3 ERJ3GSJ471V
R0717	ERJ3GEYG562V	M.RESISTOR CH 1/16W 5.6K	*4
R0719	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	*1,*2,*3 ERJ3GSJ472V
R0722	ERJ3GEYJ562V	M.RESISTOR CH 1/16W 5.6K	*4
			ERJ3GSJ562V D0GB562JA002
R0724	ERJ8GEYJ151V	M.RESISTOR CH 1/8W 150	*4
R0725	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	*1,*2,*3
R0726	MCR03PZHJ561	M.RESISTOR CH 1/16W 560	*4 ERJ3GSJ561V
R0727	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	*1,*2,*3 ERJ3GS0R00V
R0727	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	*4
R0728	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	*1 ERJ3GS0R00V
R0729	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	*1,*2
			ERJ3GSJ103V D0GB103JA002
R0730	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	*2
R0731	ERJ3GEYJ101V	M.RESISTOR CH 1/16W 100	*3
R0732	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	*3 ERJ3GSJ472V
R0732	ERJ8GEYJ102V	M.RESISTOR CH 1/8W 1K	*4
R0733	ERJ3GEYG393V	M.RESISTOR CH 1/16W 39K	*4
R0734	ERJ3GEYG682V	M.RESISTOR CH 1/16W 6.8K	[MAVD] *4
R0735	ERJ3GEYJ101V	M.RESISTOR CH 1/16W 100	*4
R0737	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	*4
R0738	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	*4 ERJ3GS0R00V
R0740	ERJ3GEYG471V	M.RESISTOR CH 1/16W 470	*1,*2
R0740	ERJ3GEYG271V	M.RESISTOR CH 1/16W 270	[MAVD] *3
R0741	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	*1,*2,*3 ERJ3GSJ221V
R0741	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	*4 D0GBR00JA017
R0742	ERJ8GEYJ151V	M.RESISTOR CH 1/8W 150	*1,*2,*3
R0745	ERJ6GEYJ335V	M.RESISTOR CH 1/10W 3.3M	*1,*2,*3
R0750	ERJ6GEYG562V	M.RESISTOR CH 1/10W 5.6K	[MAVD] *4

Ref. No.	Part No.	Part Name & Description	Remarks
R0755	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	*4
R0756	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	*4
R0757	ERJ3GEYJ752V	M.RESISTOR CH 1/16W 7.5K	*4
R1001	ERDS2FJ103	C.RESISTOR 1/4W 10K	
R1002	ERDS2FJ102	C.RESISTOR 1/4W 1K	
R1003	ERDS2FJ102	C.RESISTOR 1/4W 1K	
R1006	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R1007	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R1008	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R1009	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R1011	ERJ6GEYJ562V	M.RESISTOR CH 1/10W 5.6K	
R1012	ERDS2FJ102	C.RESISTOR 1/4W 1K	
R1017	ERDS2FJ102	C.RESISTOR 1/4W 1K	
R1023	ERDS2FJ103	C.RESISTOR 1/4W 10K	
R1025	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	*2,*3,*4
R1026	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	*2,*3,*4
R1027	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	*2,*3,*4
R1201	ERJ6GEYG333V	M.RESISTOR CH 1/10W 33K	[MAVD]
R1204	ERJ6GEYJ123V	M.RESISTOR CH 1/10W 12K	
R1501	ERDS2FJ121	C.RESISTOR 1/4W 120	
R1502	ERDS2TJ181	C.RESISTOR 1/4W 180	
R1503	ERJ6GEYJ273V	M.RESISTOR CH 1/10W 27K	
R1504	ERJ6GEYJ273V	M.RESISTOR CH 1/10W 27K	
R1505	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R2501	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R2502	ERJ6GEYJ222V	M.RESISTOR CH 1/10W 2.2K	
R2503	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R2504	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R2505	ERJ6GEYJ392V	M.RESISTOR CH 1/10W 3.9K	
R2506	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	
R2507	ERJ6GEYJ274V	M.RESISTOR CH 1/10W 270K	
R2508	ERJ6GEYG433V	M.RESISTOR CH 1/10W 43K	[MAVD]
R2509	ERDS2FJ331	C.RESISTOR 1/4W 330	
R2510	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	
R2511	ERJ6GEYG912V	M.RESISTOR CH 1/10W 9.1K	[MAVD]
R2512	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R2513	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R2514	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R2515	ERJ6GEYJ1R2V	M.RESISTOR CH 1/10W 1.2	
R2516	ERJ6GEYJ1R5V	M.RESISTOR CH 1/10W 1.5	
R2517	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R2518	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	
R3001	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	*4
R3002	ERJ6GEYJ183V	M.RESISTOR CH 1/10W 18K	
R3006	ERJ6GEYJ271V	M.RESISTOR CH 1/10W 270	D0GD271JA003
R3007	ERJ6GEYG331V	M.RESISTOR CH 1/10W 330	[MAVD]
R3012	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R3013	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	*3
R3014	ERJ6GEYJ475V	M.RESISTOR CH 1/10W 4.7M	*4
R3015	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R3016	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R3017	ERJ6GEYJ122V	M.RESISTOR CH 1/10W 1.2K	
R3018	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R3019	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R3022	ERJ6GEYJ684V	M.RESISTOR CH 1/10W 680K	
R3023	ERJ6GEYJ224V	M.RESISTOR CH 1/10W 220K	
R3026	ERJ6GEYJ392V	M.RESISTOR CH 1/10W 3.9K	*1,*2,*3

Ref. No.	Part No.	Part Name & Description	Remarks
R3026	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	*4
R3027	ERJ6GEYG271V	M.RESISTOR CH 1/10W 270	[MAVD]
R3028	ERJ6GEYG102V	M.RESISTOR CH 1/10W 1K	[MAVD]
R3029	ERJ6GEYG152V	M.RESISTOR CH 1/10W 1.5K	
R3030	ERJ6GEYG331V	M.RESISTOR CH 1/10W 330	[MAVD]
R3031	ERJ6GEYJ392V	M.RESISTOR CH 1/10W 3.9K	
R3032	ERJ6GEYJ392V	M.RESISTOR CH 1/10W 3.9K	
R3033	ERJ6GEYG152V	M.RESISTOR CH 1/10W 1.5K	
R3034	ERJ6GEYJ225V	M.RESISTOR CH 1/10W 2.2M	
R3501	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R3502	ERJ6GEYJ392V	M.RESISTOR CH 1/10W 3.9K	
R3503	ERJ6GEYG391V	M.RESISTOR CH 1/10W 390	[MAVD]
R3504	ERJ6GEYG301V	M.RESISTOR CH 1/10W 300	[MAVD]
R3506	ER0S2THF3600	M.RESISTOR 1/4W 36	[MAVD]
R4001	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R4002	ERJ6GEYJ334V	M.RESISTOR CH 1/10W 330K	
R4003	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R4004	ERJ6GEYG241V	M.RESISTOR CH 1/10W 240	[MAVD]
R4005	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R4006	ERJ6GEYJ753V	M.RESISTOR CH 1/10W 75K	[MAVD]
R4007	ERJ6GEYJ153V	M.RESISTOR CH 1/10W 15K	
R4008	ERJ6GEYJ224V	M.RESISTOR CH 1/10W 220K	
R4009	ERJ6GEYJ222V	M.RESISTOR CH 1/10W 2.2K	
R4010	ERJ6GEYJ222V	M.RESISTOR CH 1/10W 2.2K	
R4011	ERJ6GEYJ471V	M.RESISTOR CH 1/10W 470	
R4012	ERJ6GEYJ331V	M.RESISTOR CH 1/10W 330	*3
R4014	ERJ6GEYJ181V	M.RESISTOR CH 1/10W 180	*1,*2,*4
R4014	ERJ6GEYJ391V	M.RESISTOR CH 1/10W 390	*3 D0GD391JA003
R4015	ERJ6GEYJ391V	M.RESISTOR CH 1/10W 390	*1,*2,*4 D0GD391JA003
R4015	ERJ6GEYJ181V	M.RESISTOR CH 1/10W 180	*3
R4016	ERJ6GEYJ225V	M.RESISTOR CH 1/10W 2.2M	
R4017	ERJ6GEYJ273V	M.RESISTOR CH 1/10W 27K	
R4018	ERJ6GEYJ183V	M.RESISTOR CH 1/10W 18K	
R4019	ERJ6GEYJ333V	M.RESISTOR CH 1/10W 33K	
R4020	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R4021	ERJ6GEYJ332V	M.RESISTOR CH 1/10W 3.3K	
R4022	ERJ6GEYJ561V	M.RESISTOR CH 1/10W 560	
R4026	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R4027	ERJ6GEYJ332V	M.RESISTOR CH 1/10W 3.3K	
R4028	ERJ6GEYJ272V	M.RESISTOR CH 1/10W 2.7K	
R4029	ERJ6GEYJ332V	M.RESISTOR CH 1/10W 3.3K	
R4030	ERJ6GEYJ752V	M.RESISTOR CH 1/10W 7.5K	[MAVD] ⚠
R4501	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4502	ERJ6GEYJ562V	M.RESISTOR CH 1/10W 5.6K	
R4503	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4504	ERJ6GEYJ562V	M.RESISTOR CH 1/10W 5.6K	
R4505	ERJ6GEYJ562V	M.RESISTOR CH 1/10W 5.6K	
R4507	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4509	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4510	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R4511	ERJ6GEYJ562V	M.RESISTOR CH 1/10W 5.6K	
R4512	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4513	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R4514	ERJ6GEYJ562V	M.RESISTOR CH 1/10W 5.6K	
R4515	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R4516	ERJ6GEYJ511V	M.RESISTOR CH 1/10W 510	[MAVD]

Ref. No.	Part No.	Part Name & Description	Remarks
R4517	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R4518	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R4519	ERJ6GEYJ821V	M.RESISTOR CH 1/10W 820	
R4520	ERJ6GEYJ124V	M.RESISTOR CH 1/10W 120K	
R4521	ERJ6GEYJ511V	M.RESISTOR CH 1/10W 510	[MAVD]
R4522	ERJ6GEYJ303V	M.RESISTOR CH 1/10W 30K	
R4523	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R4524	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R4525	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R4527	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R4528	ERJ6GEYJ391V	M.RESISTOR CH 1/10W 390	*1,*2,*3 D0GD391JA003
R4529	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R4530	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R4531	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R4532	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R4533	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R4534	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R4537	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R4538	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R4539	ERJ6GEYJ562V	M.RESISTOR CH 1/10W 5.6K	
R4540	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4542	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R4543	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R4544	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R4545	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R4546	ERJ6GEYJ563V	M.RESISTOR CH 1/10W 56K	
R4547	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R4548	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R4549	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R4550	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4551	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R4552	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4553	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R4555	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4556	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4557	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R4559	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R4560	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R4561	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R4562	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R4563	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4564	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4565	ERJ6GEYJ622V	M.RESISTOR CH 1/10W 6.2K	[MAVD]
R4566	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R4567	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R4901	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4902	ERDS2FJ471	C.RESISTOR 1/4W 470	
R4903	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R4904	ERJ6GEYJ153V	M.RESISTOR CH 1/10W 15K	
R4905	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R4906	ERJ6GEYJ331V	M.RESISTOR CH 1/10W 330	
R4908	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4909	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R4910	ERJ6GEYJ474V	M.RESISTOR CH 1/10W 470K	
R4911	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4912	ERJ6GEYJ331V	M.RESISTOR CH 1/10W 330	
R4913	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	

Ref. No.	Part No.	Part Name & Description	Remarks
R4914	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4915	ERDS2FJ471	C.RESISTOR 1/4W 470	
R4916	ERJ6GEYJ331V	M.RESISTOR CH 1/10W 330	
R4918	ERJ6GEYJ331V	M.RESISTOR CH 1/10W 330	
R4919	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4922	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4925	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4926	ERJ6GEYJ471V	M.RESISTOR CH 1/10W 470	
R4927	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R4928	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R4929	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4930	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4931	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4932	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4933	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R4934	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4935	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4938	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R4941	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R4945	ERJ6GEYJ153V	M.RESISTOR CH 1/10W 15K	
R4946	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R4947	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R4948	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R4949	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R4950	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R4951	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R4952	ERJ6GEYJ683V	M.RESISTOR CH 1/10W 68K	
R4953	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R4954	ERJ6GEYJ331V	M.RESISTOR CH 1/10W 330	
R4955	ERJ6GEYJ121V	M.RESISTOR CH 1/10W 120	D0GD121JA003
R4956	ERJ6GEYJ121V	M.RESISTOR CH 1/10W 120	D0GD121JA003
R4957	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R4958	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R4959	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R4960	ERJ6GEYJ222V	M.RESISTOR CH 1/10W 2.2K	
R5501	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	*4
R5502	ERJ6GEYJ331V	M.RESISTOR CH 1/10W 330	*4
R5503	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	*4
R5504	ERJ6GEYJ561V	M.RESISTOR CH 1/10W 560	*4
R5505	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	*4
R5506	ERJ6GEYJ561V	M.RESISTOR CH 1/10W 560	*4
R5507	ERJ6GEYJ181V	M.RESISTOR CH 1/10W 180	*4
R5508	ERJ6GEYJ563V	M.RESISTOR CH 1/10W 56K	*4
R5509	ERJ6GEYJ183V	M.RESISTOR CH 1/10W 18K	*4
R5510	ERJ6GEYJ822V	M.RESISTOR CH 1/10W 8.2K	*4
R5511	ERJ6GEYJ123V	M.RESISTOR CH 1/10W 12K	*4
R5512	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	*4
R5513	ERJ6GEYJ133V	M.RESISTOR CH 1/10W 13K	*4
R5514	ERJ6GEYJ274V	M.RESISTOR CH 1/10W 270K	*4
R5515	ERJ6GEYJ222V	M.RESISTOR CH 1/10W 2.2K	*4
R5516	ERJ6GEYJ222V	M.RESISTOR CH 1/10W 2.2K	*4
R5517	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	*4
R5518	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	*4
R5519	ERJ6GEYJ272V	M.RESISTOR CH 1/10W 2.7K	*4
R5520	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	*4
R5521	ERJ6GEYJ123V	M.RESISTOR CH 1/10W 12K	*4
R5522	ERJ6GEYJ562V	M.RESISTOR CH 1/10W 5.6K	*4

Ref. No.	Part No.	Part Name & Description	Remarks
R5523	ERJ6GEYJ562V	M.RESISTOR CH 1/10W 5.6K	*4
R5524	ERJ6GEYJ183V	M.RESISTOR CH 1/10W 18K	*4
R5525	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	*4
R5526	ERJ6GEYJ133V	M.RESISTOR CH 1/10W 13K	*4
R5527	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	*4
R6001	ERJ6GEYJ562V	M.RESISTOR CH 1/10W 5.6K	
R6002	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R6003	ERJ6GEYJ183V	M.RESISTOR CH 1/10W 18K	
R6004	ERJ6GEYJ224V	M.RESISTOR CH 1/10W 220K	
R6005	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R6008	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R6009	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R6011	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R6012	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R6013	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R6014	ERJ6GEYJ471V	M.RESISTOR CH 1/10W 470	
R6015	ERJ6GEYJ471V	M.RESISTOR CH 1/10W 470	
R6017	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R6018	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R6019	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R6020	ERJ6GEYJ393V	M.RESISTOR CH 1/10W 39K	
R6021	ERJ6GEYJ273V	M.RESISTOR CH 1/10W 27K	
R6022	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R6023	ERJ6GEYJ273V	M.RESISTOR CH 1/10W 27K	
R6025	ERJ6GEYJ433V	M.RESISTOR CH 1/10W 43K	
R6026	ERJ6GEYJ393V	M.RESISTOR CH 1/10W 39K	
R6028	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R6029	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R6030	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R6031	ERJ6GEYJ682V	M.RESISTOR CH 1/10W 6.8K	
R6034	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R6035	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R7301	ERJ6GEYJ822V	M.RESISTOR CH 1/10W 8.2K	
R7302	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R7304	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R7305	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R7306	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
R7308	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	*1,*2,*3
R7312	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R7313	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	*4
R7316	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R7328	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R7329	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R7508	ERDS2FJ470	C.RESISTOR 1/4W 47	
R7509	ERJ6GEYJ750V	M.RESISTOR CH 1/10W 75	
R7510	ERDS2FJ821	C.RESISTOR 1/4W 820	
R7511	ERDS2FJ821	C.RESISTOR 1/4W 820	
R7513	ERJ6GEYJ183V	M.RESISTOR CH 1/10W 18K	
R7514	ERJ6GEYJ183V	M.RESISTOR CH 1/10W 18K	
R7515	ERJ6GEYJ183V	M.RESISTOR CH 1/10W 18K	
R7516	ERJ6GEYJ183V	M.RESISTOR CH 1/10W 18K	
R7517	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R7518	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	
R7521	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R7533	ERJ6GEYJ223V	M.RESISTOR CH 1/10W 22K	
R7534	ERJ6GEYJ181V	M.RESISTOR CH 1/10W 180	
R7535	ERJ6GEYJ103V	M.RESISTOR CH 1/10W 10K	

Ref. No.	Part No.	Part Name & Description	Remarks
R7536	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R7601	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	*1,*2,*3 D0GBR00JA017
R7602	VLP0304	BEAD CORE	*1,*2,*3
			BLM21AH102SN1 J0JCC0000064
R7603	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	*1,*2,*3 ECUV1H471KBV
R7604	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	*1,*2,*3 D0GBR00JA017
R7605	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	*1,*2,*3 D0GBR00JA017
R7606	ERDS2FJ331	C.RESISTOR 1/4W 330	
R7607	ERDS2FJ331	C.RESISTOR 1/4W 330	
R7608	ERJ6GEYJ151V	M.RESISTOR CH 1/10W 150	
R7611	ERJ6GEYJ471V	M.RESISTOR CH 1/10W 470	
R7613	ERJ6GEYJ151V	M.RESISTOR CH 1/10W 150	
R7615	ERJ6GEYJ471V	M.RESISTOR CH 1/10W 470	
R7701	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R7702	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R7703	ERJ6GEYJ222V	M.RESISTOR CH 1/10W 2.2K	
R7704	ERJ6GEYJ222V	M.RESISTOR CH 1/10W 2.2K	
R7705	ERJ6GEYJ564V	M.RESISTOR CH 1/10W 560K	
R7706	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R7707	ERJ6GEYJ125V	M.RESISTOR CH 1/10W 1.2M	
R7708	ERJ6GEYJ125V	M.RESISTOR CH 1/10W 1.2M	
R7709	ERJ6GEYJ682V	M.RESISTOR CH 1/10W 6.8K	
R7710	ERJ6GEYJ682V	M.RESISTOR CH 1/10W 6.8K	
R7711	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R7712	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R7713	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R7714	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R7715	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R7716	ERJ6GEYJ472V	M.RESISTOR CH 1/10W 4.7K	
R7717	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	
R7718	ERJ6GEYJ273V	M.RESISTOR CH 1/10W 27K	
R7719	ERJ6GEYJ225V	M.RESISTOR CH 1/10W 2.2M	
R7720	ERJ6GEYJ224V	M.RESISTOR CH 1/10W 220K	
R7721	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R7722	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R7723	ERJ6GEYJ104V	M.RESISTOR CH 1/10W 100K	
R7724	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R7725	ERJ6GEYJ221V	M.RESISTOR CH 1/10W 220	
R7727	ERJ6GEYJ152V	M.RESISTOR CH 1/10W 1.5K	*3,*4
R7729	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R7730	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R7731	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	
R7733	ERJ6GEYJ101V	M.RESISTOR CH 1/10W 100	
S1501	K0G934A00002	SWITCH	K0ZZ00000452
S7507	K0C111A00003	SWITCH	
T0701	EQV5EC083P	TRANSFORMER	*1
T0701	EQV5EC082P	TRANSFORMER	*2
T0701	EQV5EC081P	TRANSFORMER	*3
T4002	EQQ7QF024P	TRANSFORMER	EQQ7QF024Q
TU7601	ENG47328G1	TUNER	*1 ⚠
TU7601	ENG47327G1	TUNER	*2 ⚠
TU7601	ENG47329G1	TUNER	*3 ⚠

Ref. No.	Part No.	Part Name & Description	Remarks
TU7601	ENV57G04H6	TUNER	[MAVD] *4 ⚠
VR0701	EVNCYAA03B14	V.RESISTOR 10K	
VR5501	EVNCYAA03B52	V.RESISTOR 500	*4
X0701	VLF1417	CRYSTAL OSCILLATOR	*1 J0B4155A0003
X0701	VLF1416	CRYSTAL OSCILLATOR	*2 J0B4045A0002
X0701	VLF1430	CRYSTAL OSCILLATOR	*3 J0B3955A0001
X0702	VLF1431	CRYSTAL OSCILLATOR	*3 J0B4055A0001
X0704	VLF1495	FILTER	*1
X0704	VLF1493	FILTER	*2
X0704	VLF1497	TRANSFORMER	*3
X0704	VLF1416	CRYSTAL OSCILLATOR	*4 J0B4045A0002
X0706	VLF1372	CERAMIC FILTER	*4 EFCKK9453M
X0707	VLF1371	CERAMIC FILTER	*4 EFCKG3958M
X3001	VSX0162-TB	CRYSTAL OSCILLATOR	[MAVD] H0D443400032
X6001	VSX0660-TA	CRYSTAL OSZYLLATOR	[MAVD] H0A327200032
X6002	H0D200500014	CRYSTAL OSCILLATOR	[MAVD]
X7302	H0D245500011	CRYSTAL OSCILLATOR	H0D245500016
		MISCELLANEOUS	
	VSC4998	HA ANGLE	
	RMND0001	FL HOLDER	[MAVD]
	VMP4471	TV DEMODULATOR ANGLE	
■	VEP06E76A	DVD INTERFACE C.B.A.	[MAVD](RTL)
C31001	ECA0JHG221B	E.CAPACITOR 6.3V 220U	[MAVD]
C31002	F2A1C221A019	E.CAPACITOR 16V 220U	[MAVD] ECA1CM221B
C31005	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C31006	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C33001	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C33002	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C33003	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C33004	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C33005	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C33006	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C33007	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C33008	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C33009	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C33010	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C33022	ECEA0GKA471Q	E.CAPACITOR 4V 470U	
C33024	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C33031	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C33032	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C33033	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C33035	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C33036	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C33038	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C33040	ECA1EHG470B	E.CAPACITOR 25V 47U	[MAVD]
C33041	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C33042	ECJ1VC1H470J	C.CAPACITOR CH 50V 47P	ECUV1H470JCV
C34005	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C34006	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C34007	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C34008	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV

Ref. No.	Part No.	Part Name & Description	Remarks
C34009	ECA1CAK470XB	E.CAPACITOR 16V 47U	
C34010	ECA1CAK470XB	E.CAPACITOR 16V 47U	
C34011	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C34012	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C34013	F2A1C221A019	E.CAPACITOR 16V 220U	[MAVD] ECA1CM221B
C34014	F2A0J471A016	E.CAPACITOR 6.3V 470U	ECA0JM471B
C34015	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	
C34016	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	
C34017	ECA1CAK470XB	E.CAPACITOR 16V 47U	
C34018	ECA1CAK470XB	E.CAPACITOR 16V 47U	
C34019	ECJ1VC1H101J	C.CAPACITOR CH 50V 100P	ECUV1H101JCV
C34020	ECJ1VC1H101J	C.CAPACITOR CH 50V 100P	ECUV1H101JCV
C34021	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	ECUV1H102JCV
C34022	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	ECUV1H102JCV
C34023	ECA1CAK100XB	E.CAPACITOR 16V 10U	
C34028	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	ECUV1H102KBV
C34029	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	ECUV1H102KBV
C34031	ECJ1VC1H330J	C.CAPACITOR CH 50V 33P	[MAVD] ECUV1H330JCV
C34032	F2A0J471A016	E.CAPACITOR 6.3V 470U	ECA0JM471B
C34033	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C36001	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C36002	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C36004	ECEA1AKS221	E.CAPACITOR 6.3V 220U	
C36006	ECEA1HKS100	E.CAPACITOR 50V 10U	
C36016	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C36018	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C36021	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C36022	ECEA1CKS100	E.CAPACITOR 16V 10U	
C36023	ECEA1CKS100	E.CAPACITOR 16V 10U	
C36024	ECJ2VF1H104Z	C.CAPACITOR CH 50V 0.1U	ECUV1H104ZFN
C36025	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
D31004	B0EAKL000031	DIODE	
D31005	B0EAKL000031	DIODE	
D31006	B0EAKL000031	DIODE	
D33001	MA4056N-H	DIODE	MAZ4056NHF [MAVD]
D34001	MA4091	DIODE	MAZ409100F [MAVD]
D34002	MA4056N-H	DIODE	MAZ4056NHF [MAVD]
D36001	MA723	DIODE	MA2C72300F [MAVD]
D36002	MA4039-H	ZENER DIODE	MAZ40390HF [MAVD]
DP37501	A2BB00000098	DISPLAY TUBE	
IC36001	MN101C35DPB	MICROCONTROLLER	[MAVD]
K31001	----------	JUMPER WIRE	
K33001	----------	JUMPER WIRE	
K33002	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
K33007	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
K33008	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
K34001	----------	JUMPER WIRE	
K34008	----------	JUMPER WIRE	
K36003	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
K36006	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
L33001	G0C220JA0019	INDUCTOR	VLQ0599J220T
L33002	G0C220JA0019	INDUCTOR	VLQ0599J220T

Ref. No.	Part No.	Part Name & Description	Remarks
L33003	G0C220JA0019	INDUCTOR	VLQ0599J220T
L33004	G0C220JA0019	INDUCTOR	VLQ0599J220T
L33005	----------	JUMPER WIRE	
L33006	----------	JUMPER WIRE	
L33007	----------	JUMPER WIRE	
L33008	G0C100JA0019	INDUCTOR	VLQ0599J100T
L33009	G0C220JA0019	INDUCTOR	VLQ0599J220T
L33010	G0C220JA0019	INDUCTOR	VLQ0599J220T
L33011	G1C100KA0019	CHIP COIL	VLQ0910K100T
L34001	VLQ0599J221T	INDUCTOR	G0C221JA0019 [MAVD]
L34003	VLQ0599J221T	INDUCTOR	G0C221JA0019 [MAVD]
L36001	G0C101JA0019	INDUCTOR	VLQ0599J101T
LB34001	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
LB34002	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB34003	ERJ3GEYJ101V	M.RESISTOR CH 1/16W 100	
LB34004	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB34005	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
LB34009	VLP0323A102T	BEAD CORE	J0JBC0000011 [MAVD]
Q33003	2SB0709ARL	TRANSISTOR	2SB709A-RTX
Q33004	2SB0709ARL	TRANSISTOR	2SB709A-RTX
Q33005	2SB0709ARL	TRANSISTOR	2SB709A-RTX
Q33006	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q33007	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q33010	2SC1959-Y	TRANSISTOR	B1AAGD000006
Q33011	2SC1959-Y	TRANSISTOR	B1AAGD000006
Q34001	2SA1515	TRANSISTOR	B1ACMD000001
Q34002	2SC1959-Y	TRANSISTOR	B1AAGD000006
Q34003	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q34004	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q34005	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q36001	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q36002	2SD0601ARN	TRANSISTOR	[MAVD] 2SD601A-RTX
Q36003	2SD602A-R	TRANSISTOR	2SD0602ARL
QR34001	UNR221100L	TRANSISTOR RESISTOR	UN2211-TX
QR34004	UN2113	TRANSISTOR	UNR211300L
QR34005	UNR221100L	TRANSISTOR RESISTOR	UN2211-TX
QR34006	UNR221100L	TRANSISTOR RESISTOR	UN2211-TX
QR36001	DTC114TK-T96	TRANSISTOR	B1GBCFJA0002 [MAVD] DTC114TK-T146
QR36002	UN221L-TX	TRANSISTOR	UNR221L00L UN221L-TX
QR36003	UN221L-TX	TRANSISTOR	UNR221L00L UN221L-TX
R31001	ERJ3GEYJ101V	M.RESISTOR CH 1/16W 100	
R31002	ERJ3GEYG122V	M.RESISTOR CH 1/16W 1.2K	[MAVD] ⚠
R31003	ERJ3GEYG122V	M.RESISTOR CH 1/16W 1.2K	[MAVD] ⚠
R33002	ERJ3GEYJ122V	M.RESISTOR CH 1/16W 1.2K	ERJ3GSJ122V
R33004	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]
R33005	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]
R33006	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]
R33007	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]
R33008	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]
R33009	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]
R33010	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]

Ref. No.	Part No.	Part Name & Description	Remarks
R33011	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]
R33012	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]
R33013	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]
R33014	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R33015	ERJ3GEYJ121V	M.RESISTOR CH 1/16W 120	
R33016	ERJ3GEYJ121V	M.RESISTOR CH 1/16W 120	
R33017	ERJ3GEYJ121V	M.RESISTOR CH 1/16W 120	
R33018	ERJ3GEYJ121V	M.RESISTOR CH 1/16W 120	
R33019	ERJ3GEYJ331V	M.RESISTOR CH 1/16W 330	
R33020	ERJ3GEYJ331V	M.RESISTOR CH 1/16W 330	
R33021	ERJ3GEYJ243V	M.RESISTOR CH 1/16W 24K	D0GB243JA002
R33022	ERJ3GEYJ683V	M.RESISTOR CH 1/16W 68K	D0GB683JA002
R33023	ERJ3GEYJ203	M.RESISTOR CH 1/16W 20K	
R33024	ERJ3GEYJ473V	M.RESISTOR CH 1/16W 47K	D0GB473JA002 ERJ3GSJ473V
R33025	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]
R33026	ERJ3GEYJ822V	M.RESISTOR CH 1/16W 8.2K	D0GB822JA002 ERJ3GSJ822V
R33027	VLP0323A601R	BEAD CORE	J0JCC0000062
R33032	ERDS2FJ471	C.RESISTOR 1/4W 470	
R33034	ERJ3GEYJ121V	M.RESISTOR CH 1/16W 120	
R33035	ERJ3GEYF681V	M.RESISTOR CH 1/16W 680	[MAVD]
R34002	ERJ3GEYJ102V	M.RESISTOR CH 1/16W 1K	ERJ3GSJ102V
R34003	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	ERJ3GSJ472V
R34008	ERA6YED472V	M.RESISTOR CH 1/10W 4.7K	[MAVD]
R34009	ERA6YED472V	M.RESISTOR CH 1/10W 4.7K	[MAVD]
R34010	ERA6YED472V	M.RESISTOR CH 1/10W 4.7K	[MAVD]
R34011	ERA6YED472V	M.RESISTOR CH 1/10W 4.7K	[MAVD]
R34012	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R34013	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R34014	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
R34015	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
R34016	ERJ3GEYJ473V	M.RESISTOR CH 1/16W 47K	D0GB473JA002 ERJ3GSJ473V
R34017	ERJ3GEYJ473V	M.RESISTOR CH 1/16W 47K	D0GB473JA002 ERJ3GSJ473V
R34018	ERDS2FJ471	C.RESISTOR 1/4W 470	
R34019	ERDS2FJ471	C.RESISTOR 1/4W 470	
R34020	ERJ3GEYJ242V	M.RESISTOR CH 1/16W 2.4K	
R34021	ERJ3GEYJ242V	M.RESISTOR CH 1/16W 2.4K	
R34022	ERJ3GEYJ222V	M.RESISTOR CH 1/16W 2.2K	ERJ3GSJ222V
R34025	ERJ3GEYJ102V	M.RESISTOR CH 1/16W 1K	ERJ3GSJ102V
R34027	ERJ3GEYG122V	M.RESISTOR CH 1/16W 1.2K	[MAVD] ⚠
R34028	ERJ3GEYG392V	M.RESISTOR CH 1/16W 3.9K	[MAVD]
R34029	ECJ1VB1H103K	C.CAPACITOR CH 50V 0.01U	ECUV1H103KBV
R34031	ERJ3GEYJ101V	M.RESISTOR CH 1/16W 100	
R34032	ERJ3GEYJ101V	M.RESISTOR CH 1/16W 100	
R36035	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R36036	ERDS2FJ331	C.RESISTOR 1/4W 330	
R36037	ERJ3GEYJ273V	M.RESISTOR CH 1/16W 27K	D0GB273JA002 ERJ3GSJ273V
R36040	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R36041	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R36042	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	ERJ3GSJ472V
R36043	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	ERJ3GSJ472V
R36044	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R36045	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R36046	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R36047	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R36048	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R36049	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V

Ref. No.	Part No.	Part Name & Description	Remarks
R36050	ERJ3GEYJ223V	M.RESISTOR CH 1/16W 22K	D0GB223JA002 ERJ3GSJ223V
R36051	ERJ3GEYJ223V	M.RESISTOR CH 1/16W 22K	D0GB223JA002 ERJ3GSJ223V
R36052	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	ERJ3GSJ472V
R36053	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R36054	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R36055	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R36056	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R36057	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R36058	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R36059	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R36060	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R36061	ERJ3GEYJ153V	M.RESISTOR CH 1/16W 15K	ERJ3GSJ153V
R36063	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	ERJ3GSJ472V
R36064	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	ERJ3GSJ472V
R36065	ERJ3GEYJ471V	M.RESISTOR CH 1/16W 470	ERJ3GSJ471V
R36066	ERJ3GEYJ471V	M.RESISTOR CH 1/16W 470	ERJ3GSJ471V
R36072	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	ERJ3GSJ472V
X36001	RSXY8M00M06T	CERAMIC OSCILLATOR	H2D800400009
■	VEP03G15A	AV DECODER C.B.A.	(RTL)[MAVD]
C37001	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C37002	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C37003	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37004	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37005	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37006	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37007	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37008	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37009	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37010	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37011	ECUV1C333KBV	C.CAPACITOR CH 16V 0.033U	ECJ1VB1C333K ECUV1C333KBV
C37012	ECUV1H332KBV	C.CAPACITOR 50V 3300P	F1H1H332A219 ECJ1VB1H332K
C37013	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C37014	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37015	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37016	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37017	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37018	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37019	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37021	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37023	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	
C37024	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37025	ECJ1VF1H103Z	C.CAPACITOR CH 50V 0.01U	ECUV1H103ZFV
C37028	ECEV0JA101SP	E.CAPACITOR 6.3V 100U	
C37029	ECEV0JA331P	E.CAPACITOR 6.3V 330U	
C37030	ECEV0JA101SP	E.CAPACITOR 6.3V 100U	
C37031	ECEV0JA101SP	E.CAPACITOR 6.3V 100U	
C37032	ECUV1H681KBV	C.CAPACITOR CH 50V 680P	ECJ1VB1H681K
C37033	ECUV1H681KBV	C.CAPACITOR CH 50V 680P	ECJ1VB1H681K
C37034	ECJ1VC1H101J	C.CAPACITOR CH 50V 100P	ECUV1H101JCV
C37035	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C37036	ECJ1VB1C393K	C.CAPACITOR CH 16V 0.039U	ECUV1C393KBV
C37037	ECUV1C473KBV	C.CAPACITOR CH 16V 0.047U	ECJ1VB1C473K
C37038	ECUV1C473KBV	C.CAPACITOR CH 16V 0.047U	ECJ1VB1C473K

Ref. No.	Part No.	Part Name & Description	Remarks
C37039	ECUV1C473KBV	C.CAPACITOR CH 16V 0.047U	ECJ1VB1C473K
C37040	ECUV1C473KBV	C.CAPACITOR CH 16V 0.047U	ECJ1VB1C473K
C37041	ECJ1VB1H822K	C.CAPACITOR CH 50V 8200P	
C37042	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37044	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37045	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37046	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37047	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37048	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37049	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37050	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37051	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37052	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37053	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37054	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37055	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37056	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37057	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37058	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37059	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37060	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37061	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37062	ECJ1VB1H103K	C.CAPACITOR CH 50V 0.01U	ECUV1H103KBV
C37063	ECJ1VB1H103K	C.CAPACITOR CH 50V 0.01U	ECUV1H103KBV
C37064	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	
C37065	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	
C37066	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	
C37067	ECJ2VF1C105Z	C.CAPACITOR CH 16V 1U	
C37069	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C37070	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C37071	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	ECUV1C104KBV
C37072	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	
C37073	ECUV1C333KBV	C.CAPACITOR CH 16V 0.033U	ECJ1VB1C333K ECUV1C333KBV
C37074	ECUV1H332KBV	C.CAPACITOR 50V 3300P	F1H1H332A219 ECJ1VB1H332K
C37075	ECUV1H332KBV	C.CAPACITOR 50V 3300P	F1H1H332A219 ECJ1VB1H332K
C37076	ECUV1H332KBV	C.CAPACITOR 50V 3300P	F1H1H332A219 ECJ1VB1H332K
C37077	ECJ1VB1H152K	C.CAPACITOR CH 50V 1500P	
C37078	ECJ1VB1H152K	C.CAPACITOR CH 50V 1500P	
C37079	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	ECUV1H102KBV
C37080	ECJ2VB1C474K	C.CAPACITOR CH 16V 0.47U	
C37081	ECJ2VB0J225K	C.CAPACITOR CH 6.3V 2.2U	[MAVD]
C37083	ECJ1VC1H101J	C.CAPACITOR CH 50V 100P	ECUV1H101JCV
C37084	ECJ1VF1E104Z	C.CAPACITOR CH 25V 0.1U	ECUV1E104ZFV
C37085	ECJ1VC1H150J	C.CAPACITOR CH 50V 15P	
C37086	ECJ1VC1H150J	C.CAPACITOR CH 50V 15P	
C37087	ECUV1C106ZFP	C.CAPACITOR CH 16V 10U	F1L1C1060003
C37088	ECJ1VC1H330J	C.CAPACITOR CH 50V 33P	[MAVD]
C37089	ECJ1VC1H330J	C.CAPACITOR CH 50V 33P	[MAVD]
C37090	ECJ1VC1H101J	C.CAPACITOR CH 50V 100P	ECUV1H101JCV
C37092	ECJ1VC1H121J	C.CAPACITOR CH 50V 120P	[MAVD]
C37093	ECJ1VC1H220J	C.CAPACITOR CH 50V 22P	ECUV1H220JCV
D37001	MA2J11100L	DIODE	MA111-TX
D37002	MA2J72800L	DIODE	MA728-TX
IC37001	RFKFD002A080	8MB FLASH	[MAVD]
IC37002	C3ABKG000057	SDRAM 4MX16	

Ref. No.	Part No.	Part Name & Description	Remarks
IC37003	MN677203NP1	NODC OPTICAL DISC	
IC37004	C1AB00001645	DVD LSI	[MAVD]
IC37008	TC7S32FU	IC	C0JBAE000087
IC37009	C3ABPG000078	64MBIT SDRAM	[MAVD]
IC37010	TC7WU04FU	IC	C0JBAZ000529
IC37011	PST596JNR	RESET IC	C0EBE0000070
IC37012	TC7S32FU	IC	C0JBAE000087
K37002	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
K37005	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
K37008	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
K37009	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
L37001	G1C100KA0019	CHIP COIL	
L37002	ELJFA100KB	CHIP INDUCTOR 10UH	
L37003	ELJFA100KB	CHIP INDUCTOR 10UH	
L37004	ELJFA100KB	CHIP INDUCTOR 10UH	
L37005	ELJFA100KB	CHIP INDUCTOR 10UH	
LB37001	G1CYYYZ00003	FERRITE CORE	
LB37002	G1CYYYZ00003	FERRITE CORE	
LB37003	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37004	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37005	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37006	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37007	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37008	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37009	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37010	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37011	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37012	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37013	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37014	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37015	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37016	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37017	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37018	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37019	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37020	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37021	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37022	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37023	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37024	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37025	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37026	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37027	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37028	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37029	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37030	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37031	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37032	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37033	VLP0323A601R	BEAD CORE	J0JCC0000062
LB37034	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB37035	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB37036	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB37037	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB37038	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V

Ref. No.	Part No.	Part Name & Description	Remarks
LB37039	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB37040	J0JCC0000166	BEAD CORE	[MAVD]
LB37041	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB37042	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB37043	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB37044	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB37045	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
LB37046	G1CYYYZ00003	FERRITE CORE	
LB37047	VLP0323A102T	BEAD CORE	J0JBC0000011 [MAVD]
LB37049	J0JCC0000166	BEAD CORE	[MAVD]
P37001	K1MN50B00010	CONNECTOR 50-PIN	
P37003	K1KB22A00025	B-B CONNECTOR	
P37004	K1KB22A00025	B-B CONNECTOR	
R37001	ERJ3GEYJ682V	M.RESISTOR CH 1/16W 6.8K	D0GB682JA002 ERJ3GSJ682V
R37002	ERJ3GEYJ682V	M.RESISTOR CH 1/16W 6.8K	D0GB682JA002 ERJ3GSJ682V
R37003	ERJ3GEYJ682V	M.RESISTOR CH 1/16W 6.8K	D0GB682JA002 ERJ3GSJ682V
R37004	ERJ3GEYJ682V	M.RESISTOR CH 1/16W 6.8K	D0GB682JA002 ERJ3GSJ682V
R37005	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R37006	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R37007	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R37009	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	ERJ3GSJ472V
R37010	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	ERJ3GSJ472V
R37011	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	ERJ3GSJ472V
R37012	ERJ3GEYJ332V	M.RESISTOR CH 1/16W 3.3K	D0GB332JA002 ERJ3GSJ332V
R37013	ERJ3GEYJ332V	M.RESISTOR CH 1/16W 3.3K	D0GB332JA002 ERJ3GSJ332V
R37014	ERJ3GEYJ332V	M.RESISTOR CH 1/16W 3.3K	D0GB332JA002 ERJ3GSJ332V
R37015	ERJ3GEYJ332V	M.RESISTOR CH 1/16W 3.3K	D0GB332JA002 ERJ3GSJ332V
R37016	ERJ3GEYJ332V	M.RESISTOR CH 1/16W 3.3K	D0GB332JA002 ERJ3GSJ332V
R37017	ERJ3GEYJ332V	M.RESISTOR CH 1/16W 3.3K	D0GB332JA002 ERJ3GSJ332V
R37018	ERJ3GEYJ223V	M.RESISTOR CH 1/16W 22K	D0GB223JA002 ERJ3GSJ223V
R37019	ERJ3GEYJ223V	M.RESISTOR CH 1/16W 22K	D0GB223JA002 ERJ3GSJ223V
R37020	ERJ3GEYJ223V	M.RESISTOR CH 1/16W 22K	D0GB223JA002 ERJ3GSJ223V
R37021	ERJ3GEYJ123V	M.RESISTOR CH 1/16W 12K	ERJ3GSJ123V
R37022	ERJ3GEYJ123V	M.RESISTOR CH 1/16W 12K	ERJ3GSJ123V
R37023	ERJ3GEYJ563V	M.RESISTOR CH 1/16W 56K	ERJ3GSJ563V
R37024	ERJ3GEYJ183V	M.RESISTOR CH 1/16W 18K	D0GB183JA002 ERJ3GSJ183V
R37025	ERJ3GEYJ473V	M.RESISTOR CH 1/16W 47K	D0GB473JA002 ERJ3GSJ473V
R37026	ERJ3GEYJ473V	M.RESISTOR CH 1/16W 47K	D0GB473JA002 ERJ3GSJ473V
R37027	ERJ3GEYJ473V	M.RESISTOR CH 1/16W 47K	D0GB473JA002 ERJ3GSJ473V
R37028	ERJ3GEYJ330V	M.RESISTOR CH 1/16W 33	D0GB330JA002 ERJ3GSJ330V
R37029	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	ERJ3GSJ470V
R37030	ERJ3GEYJ820V	M.RESISTOR CH 1/16W 82	
R37031	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	ERJ3GSJ470V
R37032	ERJ3GEYJ820V	M.RESISTOR CH 1/16W 82	
R37033	ERJ3GEYJ820V	M.RESISTOR CH 1/16W 82	
R37034	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	ERJ3GSJ470V
R37036	ERJ3GEYJ105V	M.RESISTOR CH 1/16W 1M	ERJ3GSJ105V
R37037	ERJ3GEYJ105V	M.RESISTOR CH 1/16W 1M	ERJ3GSJ105V
R37038	ERJ3GEYJ471V	M.RESISTOR CH 1/16W 470	ERJ3GSJ471V
R37039	ERJ3GEYJ471V	M.RESISTOR CH 1/16W 470	ERJ3GSJ471V
R37040	ERJ3GEYJ102V	M.RESISTOR CH 1/16W 1K	ERJ3GSJ102V
R37041	ERJ3GEYJ102V	M.RESISTOR CH 1/16W 1K	ERJ3GSJ102V
R37042	ERJ3GEYJ102V	M.RESISTOR CH 1/16W 1K	ERJ3GSJ102V
R37043	ERJ3GEYJ391V	M.RESISTOR CH 1/16W 390	
R37044	ERJ3GEYJ393V	M.RESISTOR CH 1/16W 39K	D0GB393JA002 ERJ3GSJ393V

Ref. No.	Part No.	Part Name & Description	Remarks
R37045	ERJ3GEYJ303V	M.RESISTOR CH 1/16W 30K	ERJ3GSJ303V
R37046	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37047	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37048	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37051	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
R37052	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
R37053	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
R37054	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
R37055	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
R37056	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
R37061	ERJ3GEYJ822V	M.RESISTOR CH 1/16W 8.2K	D0GB822JA002 ERJ3GSJ822V
R37062	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002 ERJ3GSJ333V
R37065	ERJ3GEYJ104V	M.RESISTOR CH 1/16W 100K	D0GB104JA002 ERJ3GSJ104V
R37066	ERJ3GEYJ104V	M.RESISTOR CH 1/16W 100K	D0GB104JA002 ERJ3GSJ104V
R37069	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	ERJ3GSJ470V
R37070	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	ERJ3GSJ470V
R37071	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	ERJ3GSJ470V
R37072	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	ERJ3GSJ470V
R37073	ERJ3EKF2002V	M.RESISTOR CH 1/16W 20K	[MAVD]
R37074	ERJ3EKF2002V	M.RESISTOR CH 1/16W 20K	[MAVD]
R37076	ERJ3GEYJ101Z	M.RESISTOR CH 1/16W 100	[MAVD]
R37077	ERJ3GEYJ101Z	M.RESISTOR CH 1/16W 100	[MAVD]
R37080	ERJ3GEYJ101Z	M.RESISTOR CH 1/16W 100	[MAVD]
R37081	ERJ3GEYJ101Z	M.RESISTOR CH 1/16W 100	[MAVD]
R37082	ERJ3GEYJ101Z	M.RESISTOR CH 1/16W 100	[MAVD]
R37083	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37084	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37085	ERJ3GEYJ471V	M.RESISTOR CH 1/16W 470	ERJ3GSJ471V
R37087	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	ERJ3GS0R00V
R37088	ERJ3GEYJ820V	M.RESISTOR CH 1/16W 82	
R37089	ERJ3GEYJ820V	M.RESISTOR CH 1/16W 82	
R37090	ERJ3GEYJ330V	M.RESISTOR CH 1/16W 33	D0GB330JA002 ERJ3GSJ330V
R37091	ERJ3GEYJ330V	M.RESISTOR CH 1/16W 33	D0GB330JA002 ERJ3GSJ330V
R37093	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	ERJ3GSJ470V
R37094	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37095	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37096	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37097	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37098	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37099	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37100	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37101	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37102	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
R37103	VLP0323A102T	BEAD CORE	J0JBC0000011 [MAVD]
R37104	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37105	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
R37106	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R37109	ERJ3GEYJ681V	M.RESISTOR CH 1/16W 680	D0GB681JA002 ERJ3GSJ681V
R37110	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	ERJ3GSJ470V
R37111	ERJ3GEYJ681V	M.RESISTOR CH 1/16W 680	D0GB681JA002 ERJ3GSJ681V
RA37002	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]
RA37003	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]
RA37004	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]
RA37005	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]
RA37006	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]
RA37007	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]

Ref. No.	Part No.	Part Name & Description	Remarks
RA37008	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]
RA37014	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]
RA37015	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]
RA37016	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]
RA37017	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]
RA37018	VRE0219A820T	CHIP RESISTOR ARRAY	D1H88204A008 [MAVD]
X37001	H2D169500015	CERAMIC OSCILLATOR	
X37002	VSX0961	CRYSTAL OSCILLATOR	H0J270500016
■	VEP04811A	FRONT JACK C.B.A.	[MAVD](RTL)
C4801	ECJ1VC1H101J	C.CAPACITOR CH 50V 100P	ECUV1H101JCV
C4802	ECJ1VC1H101J	C.CAPACITOR CH 50V 100P	ECUV1H101JCV
C4803	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	ECUV1H102KBV
C4805	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	ECUV1H102KBV
JK4801	K2HA307A0003	JACK	[MAVD]
PP4801	K1KA10B00155	CONNECTOR 10-PIN	
R4801	ERJ3GEYJ471V	M.RESISTOR CH 1/16W 470	ERJ3GSJ471V
R4802	ERJ3GEYJ471V	M.RESISTOR CH 1/16W 470	ERJ3GSJ471V
R4803	ERJ3GEYJ750	M.RESISTOR CH 1/16W 75	
R4805	ERJ3GEYJ332V	M.RESISTOR CH 1/16W 3.3K	D0GB332JA002 ERJ3GSJ332V
R4831	ERJ3GEYJ182V	M.RESISTOR CH 1/16W 1.8K	ERJ3GSJ182V
R4833	ERJ3GEYJ332V	M.RESISTOR CH 1/16W 3.3K	D0GB332JA002 ERJ3GSJ332V
R4834	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	ERJ3GSJ472V
R4835	ERJ3GEYJ682V	M.RESISTOR CH 1/16W 6.8K	D0GB682JA002
R4836	ERJ3GEYJ182V	M.RESISTOR CH 1/16W 1.8K	ERJ3GSJ182V
S4831	EVQ11G07K	SWITCH	
S4832	EVQ11G07K	SWITCH	
S4833	EVQ11G07K	SWITCH	
S4834	EVQ11G07K	SWITCH	
S4835	EVQ11G07K	SWITCH	
S4836	EVQ11G07K	SWITCH	
S4837	EVQ11G07K	SWITCH	
■	VEP06E86A	FRONT SWITCH C.B.A.	(RTL)[MAVD]
C7551	ECEA0JKS470	E.CAPACITOR 6.3V 47U	
C7552	ECJ1VF1C104Z	C.CAPACITOR CH 16V 0.1U	ECUV1C104ZFV
IR7551	RPM6937-V11	IR SENSOR	C9ZA00000073
PP7551	K1KA06B00126	6P CONNECTOR (PLUG)	
PP7552	K1KA06B00126	6P CONNECTOR (PLUG)	
R6162	ERJ3GEYJ122V	M.RESISTOR CH 1/16W 1.2K	ERJ3GSJ122V
R7551	ERDS2FJ330	C.RESISTOR 1/4W 33	
R7552	ERJ3GEYJ103V	M.RESISTOR CH 1/16W 10K	D0GB103JA002 ERJ3GSJ103V
R7553	ERJ3GEYJ221V	M.RESISTOR CH 1/16W 220	ERJ3GSJ221V
R7554	ERJ3GEYJ182V	M.RESISTOR CH 1/16W 1.8K	ERJ3GSJ182V
R7556	ERJ3GEYJ332V	M.RESISTOR CH 1/16W 3.3K	D0GB332JA002 ERJ3GSJ332V
R7561	ERJ3GEYJ182V	M.RESISTOR CH 1/16W 1.8K	ERJ3GSJ182V

Ref. No.	Part No.	Part Name & Description	Remarks
R7562	ERJ3GEYJ332V	M.RESISTOR CH 1/16W 3.3K	D0GB332JA002 ERJ3GSJ332V
S6162	EVQ11G07K	SWITCH	
S6163	EVQ11G07K	SWITCH	
S6181	EVQ11G07K	SWITCH	
S7551	EVQ11G07K	SWITCH	
S7552	EVQ11G07K	SWITCH	
S7562	EVQ11G07K	SWITCH	
S7564	EVQ11G07K	SWITCH	
S7565	EVQ11G07K	SWITCH	
S7568	EVQ11G07K	SWITCH	
		MISCELLANEOUS	
	VMD2247	IR RECEIVER HOLDER	
■	REP3091A-1N	TERMINAL C.B.A.	(RTL)[MAVD]
C2049	ECUV1H330JCV	C.CAPACITOR CH 50V 33P	ECJ1VC1H330J
C2050	ECUV1H330JCV	C.CAPACITOR CH 50V 33P	ECJ1VC1H330J
C2051	ECST1AY106ZR	T.CAPACITOR CH 10V 10U	ECST1AY106R
C2053	ECUV1H101JCV	C.CAPACITOR CH 50V 100P	ECJ1VC1H101J
C2501	EEVFC0J221P	E.CAPACITOR 6.3V 220U	
C2502	ECEV1CA101WP	E.CAPACITOR 16V 100U	
C2503	ECEV1CA220WR	E.CAPACITOR 16V 22U	
C2504	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C2505	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C2506	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C2507	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C2508	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C2509	EEVFC1C100R	E.CAPACITOR 16V 10U	
C2511	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C2512	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C2513	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C5201	EEVHB1C100R	E.CAPACITOR 16V 10U	
C5202	EEVHB1C100R	E.CAPACITOR 16V 10U	
C5203	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C5204	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C5205	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	
C5206	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	
C5207	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	
C5208	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	
C5211	EEVHB0J470R	E.CAPACITOR 6.3V 47U	
C5215	EEVHB0J470R	E.CAPACITOR 6.3V 47U	
C5221	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C5223	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C5224	ECUV1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1VB1C104K
C5225	ECUV1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1VB1C104K
C5231	ECUV1H101JCV	C.CAPACITOR CH 50V 100P	ECJ1VC1H101J
C5232	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C5233	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C5234	ECUV1H222KBV	C.CAPACITOR CH 50V 2200P	ECJ1VB1H222K
C5235	ECUV1H391JCV	C.CAPACITOR CH 50V 390P	F1H1H391A004
C5236	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	
C5237	ECUV1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1VB1C104K
C5238	ECUV1A224KBV	C.CAPACITOR CH 10V 0.22U	F1H1A224A001
C5239	ECUV1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1VB1C104K

Ref. No.	Part No.	Part Name & Description	Remarks
C5240	ECUV1H561JCV	C.CAPACITOR CH 50V 560P	ECJ1VC1H561J
C5242	ECUV1H472KBV	C.CAPACITOR CH 50V 4700P	ECJ1VB1H472K
C5251	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	
C5252	VCS1AS106R	T.CAPACITOR 10V 10U	
C5253	ERJ3GEYJ472V	M.RESISTOR CH 1/16W 4.7K	
D5251	MA728-TX	DIODE	MA2J72800L
FP5201	K1MN30B00062	CONNECTOR 30-PIN	
FP5202	K1MN50B00010	CONNECTOR 50-PIN	
IC2501	BA5833FM-E2	IC	
IC5201	AN8708FHK-V	IC	
L5201	ELJEA100KF	COIL 10UH	
L5202	ELJEA100KF	COIL 10UH	
L5251	ELJEA100KF	COIL 10UH	
LB5201	JALBK2HS470T	COIL	G1CYYYZ00003
LB5202	VLP0323A601R	CHIP SOLID INDUCTOR	J0JCC0000062
LB5203	VLP0155-T	COIL	J0JCC0000119
LB5204	VLP0155-T	COIL	J0JCC0000119
LB5205	VLP0323A601R	CHIP SOLID INDUCTOR	J0JCC0000062
LB5206	VLP0323A601R	CHIP SOLID INDUCTOR	J0JCC0000062
Q5211	2SB1115-T	TRANSISTOR	B1BDBF000004
Q5215	2SB1115-T	TRANSISTOR	B1BDBF000004
QR5251	UN2121-TX	TRANSISTOR	UNR212100L
R2502	ERJ3GEYJ153V	M.RESISTOR CH 1/16W 15K	
R2503	ERJ3GEYJ153V	M.RESISTOR CH 1/16W 15K	
R2504	ERJ3GEYJ823V	M.RESISTOR CH 1/16W 82K	D0GB823JA002
R2505	ERJ3GEYJ823V	M.RESISTOR CH 1/16W 82K	D0GB823JA002
R2507	ERJ6GEYJ6R8V	M.RESISTOR CH 1/10W 6.8	
R5203	ERJ3GEYJ563V	M.RESISTOR CH 1/16W 56K	
R5204	ERJ3GEYJ223V	M.RESISTOR CH 1/16W 22K	D0GB223JA002
R5211	ERJ3GEYJ2R2V	M.RESISTOR CH 1/16W 2.2	D0GB2R2JA002
R5212	ERJ12YJ270H	M.RESISTOR CH 1/2W 27	
R5213	ERJ3GEYJ473V	M.RESISTOR CH 1/16W 47K	D0GB473JA002
R5214	ERJ3GEYJ223V	M.RESISTOR CH 1/16W 22K	D0GB223JA002
R5215	ERJ3GEYJ2R2V	M.RESISTOR CH 1/16W 2.2	D0GB2R2JA002
R5216	ERJ12YJ270H	M.RESISTOR CH 1/2W 27	
R5217	ERJ3GEYJ473V	M.RESISTOR CH 1/16W 47K	D0GB473JA002
R5221	ERJ3GEYJ822V	M.RESISTOR CH 1/16W 8.2K	D0GB822JA002
R5222	ERJ3GEYJ822V	M.RESISTOR CH 1/16W 8.2K	D0GB822JA002
R5232	ERJ3RBD123V	M.RESISTOR CH 1/16W 12K	
R5235	ERJ3GEYJ105V	M.RESISTOR CH 1/16W 1M	
R5236	ERJ3GEY0R00V	M.RESISTOR CH 1/16W 0	
R5252	ERJ3GEYJ102V	M.RESISTOR CH 1/16W 1K	
RA2501	EXBV8V473JV	RESISTOR-RESISTOR	
RA5231	EXBV8V101JV	RESISTOR-RESISTOR	
SW2501	RSH1A048-A	DOUBLE SWITCH	

Ref. No.	Part No.	Part Name & Description	Remarks
■	----------	CYLINDER STATOR C.B.A.	
		MISCELLANEOUS	
	VJS3537F009G	CONNECTOR (FEMALE) 9P	K1MN09B00039
	HW-300A-DF	HALL IC	B4AAB0000007

19. SCHEMATIC DIAGRAM FOR PRINTING WITH A4 SIZE

443NT [L]	4.43 NTSC Ⓛ
A. COMP	AUDIO COMPONENT SIGNAL
A. COMPO	AUDIO COMPONENT SIGNAL
A. D.P [L]	AUDIO DUBBING PAUSE Ⓛ
A. D/L [L]	AUDIO DUBBING PAUSE Ⓛ
A. DEF [S]	AUDIO DEFEAT
A. DEF [S] [L]	AUDIO DEFEAT
A. DUB P [L]	AUDIO DUBBING PAUSE Ⓛ
A. DUB [H]	AUDIO DUBBING Ⓗ
A. ERASE	AUDIO ERASE
A. H. SW	AUDIO HEAD SWITCHING PULSE
A. HEAD [R]	AUDIO HEAD (REC)
A. HEAD [W]	AUDIO HEAD (PLAY)
A. IN [L]	AUDIO INPUT (L)
A. IN [R]	AUDIO INPUT (R)
A. MUT [H]	AUDIO MUTE Ⓗ
A. MUTE [H]	AUDIO MUTE Ⓗ
A. OUT [L]	AUDIO OUTPUT (L)
A. OUT [R]	AUDIO OUTPUT (R)
A. RF OUT	AUDIO RF SIGNAL OUTPUT
A/VS/S. DATA	AV SW/SERIAL DATA
AC ONLINE	AC ONLINE
AC. O/EE. H	AC ONLINE/EE Ⓗ
AFC S C	AFC S CURVE
AFC [S]	AFC S CURVE
AFC. DEF	AFC DEFEAT
ARFC OUT	AUDIO RF SIGNAL OUTPUT
ART. V	ARTIFICIAL VERTICAL SYNC SIGNAL
ART. V. MM	ARTIFICIAL VERTICAL SYNC SIGNAL MONO MULTI
ART. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL Ⓗ/NORMAL
AT. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL
ATSW/TEST/NOR/SE	TEST/NORMAL/SERVICE
AUDIO IN [L]	AUDIO INPUT (L)
AUDIO IN [R]	AUDIO INPUT (R)
AUDIO OUT [L]	AUDIO OUTPUT (L)
AUDIO OUT [R]	AUDIO OUTPUT (R)
AUDIO SELECT [H]	AUDIO SELECT Ⓗ
AUDIO. L	AUDIO (L)
AUDIO. R	AUDIO (R)
AV CNT	AV CONTROL
AV CTL	AV CONTROL
AV CTL/S. CLK	AV CONTROL/SERIAL CLOCK
AV. C.M.	AV CONTROL MODE
AVCNT/METER. R	AV CONTROL/LEVEL METER (R)
AVSW/METER. L	AV SW/LEVEL METER (L)
B MODE. H	B MODE Ⓗ
B.G.P	BURST GATE PULSE
BACKUP 5V	BACK UP 5V
BAND. U.E.	BAND U
BANDVL. D	BAND VL
BI/MI [L]	BILINGUAL/MIX Ⓛ
BIL	BILINGUAL
BIL [L]	BILINGUAL Ⓛ
BIL. [H]	BILINGUAL Ⓗ
BIL/M1 [L]	BILINGUAL Ⓛ
BS CLOCK	BS CLOCK
BS DATA	BS DATA
BS LCH IN	BS L CHANNEL INPUT
BS MIX [H]	BS MIX Ⓗ
BS MON [H]	BS MONITOR Ⓗ
BS MONI [H]	BS MONITOR Ⓗ
BS RCH IN	BS R CHANNEL INPUT
BS VIDEO	BS VIDEO SIGNAL
BS VIDEO/BS1	BS VIDEO SIGNAL
BS [H]	BS Ⓗ
BS. LEVEL	BS LEVEL
BS. M [H]	BS MONITOR Ⓗ
BS/VTR [H]	BS/VTR Ⓗ
BUS CLK	BUS CLOCK
BUS LSN	BUS LISTEN
BUS TLK	BUS TALK
BUZZER	BUZZER
CAP EC	CAPSTAN TORQUE CONTROL
CAP M GND	CAPSTAN MOTOR GND
CAP. ET	CAPSTAN TORQUE CONTROL
CAP. FG1	CAPSTAN FG1 PULSE
CAP. FG2	CAPSTAN FG2 PULSE
CAS. SW	CASSETTE SW
CCN	PLAYBACK CONTROL SIGNAL (–)
CCP	PLAYBACK CONTROL SIGNAL (+)
CHM	CONTROL SIGNAL (+)
CHP	CONTROL SIGNAL (–)
CINEM [L]	CINEMA Ⓛ
CINEMA [L]	CINEMA Ⓛ
CINEMA/MIX	CINEMA/MIX
CKL	RATCH LOCK
CKS	SHIFT LOCK
CL	CLOCK
CLK	CLOCK
CLK (C.G)	CLOCK
CLOCK. IN	CLOCK INPUT
CLP	CLAMP
COL/B/W/NOR	COLOUR/BLACK & WHITE/NORMAL
COLOR [H]	COLOUR Ⓗ
CONV	CONVERTOR
CS	CHIP SELECT
CTL GND	CONTROL GND
CTL HEAD [+]	CONTROL HEAD (+)
CTL HEAD [–]	CONTROL HEAD (–)
CTL [+]	CONTROL HEAD (+)
CTL [–]	CONTROL HEAD (–)
CUE BIAS	CUE BIAS
CURRENT LIM	CURRENT LIMMITER
CYL ET	CYLINDER TORQUE CONTROL

CYL GND	CYLINDER GND
D.F.M. REC [H]	DELAIED FM RECORDING Ⓗ
D. FM REC [L]	DELAIED FM RECORDING Ⓛ
D. GND	DIGITAL GND
D. REC [H]	DELAYED RECORDING Ⓗ
D4/S. LED	D4/STILL LED
D4/STILLED	D4/STILL LED
DAC [CLK]	TUNER DAC (CLOCK)
DAC/FSCS	TUNER DAC/FS CHIP SELECT
DAREC [H]	DELAYED AUDIO RECORDING Ⓗ
DATA	DATA
DECODER [L]	DECODER (L)
DECODER [R]	DECODER (R)
DEW	DEW
DEW SNS	DEW SENSOR
DFMRE [H]	DELAYED FM AUDIO RECORDING Ⓗ
E. REC 5V	EXCEPT RECORDING 5V
EC	ERROR TORQUE CONTROL
ECR	ERROR TORQUE CONTROL REFERENCE VOLTAGE
EDT TRIG [L]	EDIT TRIGGER Ⓛ
EDIT [H]	EDIT Ⓗ
EE [H]	EE Ⓗ
EE [H]/INS [M]	EE Ⓗ/INSERT Ⓜ
EE. VV. TR	EE/VV/TRICK PLAY
EJECT. PO	EJECT POSITION
EJECT/VDET	EJECT/REVERSE SLOW LOCK
ENV. SEL	ENVELOPE SELECT
ENVE. OUT	ENVELOPE OUTPUT
ENVE. SEL	ENVELOPE SELECT
ENV SELECT	ENVELOPE SELECT
EP [H]	LP Ⓗ
EP/LP [H]	LP Ⓗ
EP/LP/SP	LP/SP
EP/SS [H]	LP/SLOW/STILL/STOP Ⓗ
EPROMCS	EPROM CHIP SELECT
EX. REC 5V	EXCEPT RECORDING 5V
FF/REW [L]	FIRST FORWARD/REWIND Ⓛ
FG1 IN	FG1 PULSE INPUT
FG2 IN	FG2 PULSE INPUT
FILTER ADJUSTMENT	FILTER ADJUSTMENT
FLY ERASE [H]	FLYING ERASE HEAD ON Ⓗ
FLY ON [H]	FLYING ERASE HEAD ON Ⓗ
FLY. E [H]	FLYING ERASE HEAD ON Ⓗ
FM MUT [H]	FM AUDIO MUTE Ⓗ
FM MUTE [H]	FM AUDIO MUTE Ⓗ
FM OUT [L]	FM OUTPUT (L)
FM OUT [R]	FM OUTPUT (R)
FM PACK OUT [L]	FM PACK OUTPUT (L)
FM PACK OUT [R]	FM PACK OUTPUT (R)
FM/BS SEL [L]	FM/BS SELECT (L)
FM/BS SEL [R]	FM/BS SELECT (R)
FS. CLK	FS CLOCK
FUL. E [H]	FULL ERASE HEAD ON Ⓗ
FULL. E [H]	FULL ERASE HEAD ON Ⓗ

FULL. E. 12V	FULL ERASE 12V
GND [A]	GND (ANALOG)
GND [TU]	GND (TUNER)
GND/N. SW. 12V	GND/NON SW 12V
H. SYNC	HORIZONTAL SYNC
H. AMP. SW	HEAD AMP SW PULSE
H. P <R>	HEAD PHONE (R)
H. P <L>	HEAD PHONE (L)
H. P GND	HEAD PHONE GND
H. P OUT [L]	HEAD PHONE OUTPUT (L)
H. P OUT [R]	HEAD PHONE OUTPUT (R)
H. SW	HEAD SW PULSE
HEAD PHONE [L]	HEAD PHONE (L)
HEAD PHONE [R]	HEAD PHONE (R)
HEAD SW	HEAD SW
HEATER [+]	HEATER (+)
HEATER [–]	HEATER (–)
HSS	HORIZONTAL SYNC SIGNAL
HTR [+]	HEATER (+)
HTR [–]	HEATER (–)
I RFE	REFERENCE CURRENT
ICL	CONTROL AGC CIRCUIT
IF	INTERMEDIATE FREQUENCY
IN SELA1	INPUT SELECT A1 POSITION
IN SELA2	INPUT SELECT A2 POSITION
IN SELA3	INPUT SELECT A3 POSITION
INS L/R [L]	INSERT Lch/Rch Ⓛ
INS. [H]	INSERT Ⓗ
INSEL A1	INPUT SELECT A1 POSITION
INSEL A2	INPUT SELECT A2 POSITION
INSERT	INSERT
INSERT [H]	INSERT Ⓗ
IO CS	INPUT/OUTPUT CHIP SELECT
JOG1	JOG1
JOG S3 LED/FOWRD	JOG LED/FORWARD LED
JOG/F. LED	JOG LED/FORWARD LED
JSB [H]	JSB Ⓗ
JST. CLCK	JUST CLOCK
JST. CLK	JUST CLOCK
JST. CLOCK	JUST CLOCK
L. OUT	Lch OUTPUT
L. CH [H]	Lch Ⓗ
L. CH [L]	Lch Ⓛ
LED (MAIN)	LED (MAIN)
LED (STEREO)	LED (STEREO)
LED (SUB)	LED (SUB)
LED CKL	LED SERIAL CLOCK
LED CKS	LED SERIAL CLOCK
LED DATA	LED SERIAL DATA
LINE IN 1 [L]	LINE INPUT 1 (L)
LINE IN 1 [R]	LINE INPUT 1 (R)
LINE IN 2 [L]	LINE INPUT 2 (L)
LINE IN 2 [R]	LINE INPUT 2 (R)
LINE IN V	LINE INPUT VIDEO
LINE IN [L]	LINE INPUT (L)

LINE IN [R]	LINE INPUT (R)
LINE OUT [L]	LINE OUTPUT (L)
LINE OUT [R]	LINE OUTPUT (R)
LP [H]	LP Ⓗ
LPTRI [L]	LP TRICK PLAY Ⓛ
Lch/A. DUB	Lch/AUDIO DUBBING
M GND	MOTOR GND
M REG	MOTOR REGULATOR
MAIN OUT	MAIN OUTPUT
MAIN [L]	MAIN Ⓛ
MAIN/MONO	MAIN/MONAURAL
MAX IN	MAXIMAM INPUT
MES [H]	MESECAM Ⓗ
MESE [H]	MESECAM Ⓗ
MESE [L]	MESECAM Ⓛ
METER 5V	LEVEL METER 5V
METER [L]	LEVEL METER (L)
METER [R]	LEVEL METER (R)
METER. L/AVS	LEVEL METER (L)
METER. R/AVC	LEVEL METER (R)
MI/BI [L]	MIX Ⓗ/BILIGUAL
MIC GND	MIC GND
MIC IN	MIC INPUT
MIC IN [L]	MIC INPUT (L)
MIC IN [R]	MIC INPUT (R)
MIC [H]	MIC Ⓗ
MIX [H]	MIX Ⓗ
MIX [H]/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ
MIX/CINE	MIX Ⓗ/CINEMA SOUND Ⓛ
MIX/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ
MN. H/M. L	MONAURAL Ⓗ/MAIN Ⓛ
MN. H/MAI. L	MONAURAL Ⓗ/MAIN Ⓛ
MN2/MES. L	MONAURAL 2/MESECAM Ⓛ
MODE SEL	AUDIO MODE SELECT
MODE SW	AUDIO MODE SW
MODE. S. IN	AUDIO MODE SELECT INPUT
MODE. S. OUT	AUDIO MODE SELECT OUTPUT
MONO [H]	MONAURAL Ⓗ
MONO [H]/MAIN [L]	MONAURAL Ⓗ/MAIN Ⓛ
MONO2 [L]	MONAURAL 2
MONO2/MESE [FM(L)]	MONAURAL 2/MESECAM (FM Ⓛ)
MOTOR GND	MOTOR GND
MUTE	MUTE
N. A. REC [L]	NORMAL AUDIO RECORDING
N. SW 12V	NON SW 12V
N. SW. 5. DET	NON SW 5V DETECT
NICAM	NICAM
NICAM [L]	NICAM Ⓛ
NOL [H]	PAL Ⓗ/4.43 NTSC Ⓜ/3.58 NTSC Ⓛ
NOR/SOFT [H]	NORMAL/SOFT TAPE PLAY Ⓗ
NORMAL [H]	NORMAL Ⓗ
NR BIAS	NR BIAS
NTSC [L]	NTSC Ⓛ
OCH	CONTROL AGC CIRCUIT
OUT	OUTPUT

P-OFF [H]	POWER OFF Ⓗ
P-OFF [L]	POWER OFF Ⓛ
P. FAIL	POWER FAILURE DETECT
P. OFF [H]	POWER OFF Ⓗ
P. OFF [L]	POWER OFF Ⓛ
PAL [H]	PAL Ⓗ
PAL [L]/NTSC [H]	PAL Ⓛ/NTSC Ⓗ
PB ADJ OUT	PLAYBACK ADJUST OUTPUT
PB OUT	PLAYBACK OUTPUT
PB. H	PLAYBACK Ⓗ
PFG	PG/FG
PHOTSN +B	PHOTO SENSOR +B
PICT. CNT	PICTURE CONTROL
PLAY LED/RVS LED	PLAY LED/REVERSE LED
PLAY. PO	PLAY POSITION
PLAY/R. LED	PLAY LED/REVERSE LED
PLY/DEW	PLAY/DEW Ⓗ
POWER OFF [L]	POWER OFF Ⓛ
PREROLL [H]	PREROLL Ⓗ
PWRFAIL	POWER FAILURE DETECT
R. CH [H]	Rch Ⓗ
R. CH [L]	Rch Ⓛ
R. ST	RESET
R/S/F	REVERSE Ⓗ/STOP Ⓜ/FORWARD Ⓛ
RCH [H]	Rch Ⓗ
REC 12V	RECORDING 12V
REC CHROMA	RECORDING CHROMINANCE SIGNAL
REC H	RECORDING Ⓗ
REC IN	RECORDING INPUT
REC OUT [L]	RECORDING OUTPUT Ⓛ
REC START	RECORDING START
REC VR [C]	RECORDING VOLUME (COMMON)
REC VR [L]	RECORDING VOLUME (L)
REC VR [R]	RECORDING VOLUME (R)
REC Y	RECORDING LUMINANCE SIGNAL
REC [H]	RECORDING Ⓗ
REC. C	RECORDING CHROMINANCE SIGNAL
REC. Y	RECORDING LUMINANCE SIGNAL
REC/EE CTL	RECORDING/EE CONTROL
REEL-T	REEL PULSE (TAKE-UP)
REEL-S	REEL PULSE (SUPPLY)
REGULATOR FILTER	REGULATOR FILTER
RESET	RESET
REV M F/R	REVIEW MOTOR FORWARD/REVERSE
REV M V1	REVIEW MOTOR V1
REV M V2	REVIEW MOTOR V2
REV MOTOR F/R	REVIEW MOTOR FORWARD/REVERSE
REV MOTOR V1	REVIEW MOTOR V1
REV MOTOR V2	REVIEW MOTOR V2
REV MOTOR [+]	REVIEW MOTOR (+)
REV MOTOR [–]	REVIEW MOTOR (+)
REV. M. GND	REVIEW MOTOR GND
RF. CHROMA	RF CHROMINANCE SIGNAL

RF OUT	RF OUTPUT
RF Y	RF LUMINANCE SIGNAL
RF. Y. IN	RF LUMINANCE SIGNAL INPUT
RF. Y. OUT	RF LUMINANCE SIGNAL OUTPUT
ROTAR. SW	ROTARY SW
ROTARY	ROTARY SW
RST	RESET
RST [L]	RESET Ⓛ
Rch/INST	Rch/INSERT
S IN	SERIAL DATA INPUT
S OUT	SERIAL DATA OUTPUT
S-PHOTO	SUPPLY PHOTO TRANSISTOR
S-RL. PLS	SUPPLY REEL PULSE
S. CLK	SERIAL CLOCK
S. CLK/AV	SERIAL CLOCK/AV
S. DATA	SERIAL DATA
S. DATA/A	SERIAL DATA
S. PHOTO	SUPPLY PHOTO TRANSISTOR
S. TAB [L]	SAFETY TAB SW ON Ⓛ
S/P/N	SECAM/PAL/NTSC
SC IN	SERIAL CLOCK INPUT
SC OUT	SERIAL CLOCK OUTPUT
SCK SELECT	SERIAL CLOCK SELECT
SEL OUT [L]	SELECT OUTPUT (L)
SEL OUT [R]	SELECT OUTPUT (R)
SHUTTLE 1	SHUTTLE 1
SIF	SOUND INTERMEDIATE FREQUENCY
SLMUT [H]	INPUT SELECT MUTE Ⓗ
SLNID [+]	SOLENOID (+)
SLNID [–]	SOLENOID (–)
SLW TR. MM	SLOW TRACKING MONO MULTI
SLW TR. REF	SLOW TRACKING REFERENCE VOLTAGE
SNS. GND	SENSOR GND
SOFT [H]	SOFT TAPE PLAY Ⓗ
SOFT [H]/NORMAL	SOFT TAPE PLAY Ⓗ/NORMAL Ⓗ
SOLENOID ON [L]	SOLENOID ON Ⓛ
SP [H]	SP Ⓗ
SP/L/SLP	SP/LP
SSS [L]	SLOW/STILL/STOP
STEREO LED	STEREO LED
STEREO [H]	STEREO Ⓗ
STEREO [L]	STEREO Ⓛ
STOP. PO	STOP POSITION
STOP/5V	STOP POSITION/5V
STOP1/TAPE SEL	STOP1 POSITION/TAPE SELECT
STOP1/PAL:ST	STOP1 POSITION/PAL
STOP2. PO	STOP 2 POSITION
STOP2/S-TAB	STOP 2 POSITION/SAFETY TAB SW
STREO [H]	STEREO Ⓗ
SUB BIAS	SUB BIAS
SUB. SW	SUB SW
SVHS CAS [L]	S-VHS CASSETTE Ⓛ
SW. 5. DET	SW 5V DETECT
SYNC [L]	SYNC Ⓛ
SYSCON 5V	SYSTEM CONTROL 5V
SYSTEM	SYSTEM SW
T-PHOTO	TAKE-UP PHOTO TRANSISTOR
T-RL. PLS	TAKE-UP REEL PULSE
T. BUSCLK	TIMER BUS CLOCK
T. BUSLSN	TIMER BUS LISTEN
T. BUSTLK	TIMER BUS TALK
T. END [L]	TAPE END Ⓛ
T. PHOTO	TAKE-UP PHOTO TRANSISTOR
TAPE END [L]	TAPE END Ⓛ
TAPE END [L]/CAM	TAPE END Ⓛ/CAMERA PAUSE
TEST	TEST MODE
TPZ	TRAPEZOIDAL WAVE CIRCUIT
TRIC [L]	TRIC PLAY Ⓛ
TRICK [L]	TRIC PLAY Ⓛ
TRK. ENV	AUTO TRACKING ENVELOPE DETECT
TU. AUDIO	TUNER AUDIO
TU. GND	TUNER GND
TU. V. IN	TUNER VIDEO SIGNAL INPUT
TU. VIDEO	TUNER VIDEO
TUN NOR IN	TUNER NORMAL INPUT
TUN R	TUNER AUDIO (R)
TUN. AUDIO IN	TUNER AUDIO INPUT
TUNER 12V	TUNER 12V
TUNER L	TUNER AUDIO (L)
TUNER V IN	TUNER VIDEO SIGNAL INPUT
TUNER [L]	TUNER AUDIO (L)
TUNER [N]	TUNER AUDIO (NORMAL)
TUNER [R]	TUNER AUDIO (R)
TUNER. 12	TUNER 12V
TUOFF [H]	TUNER OFF Ⓗ
TV. AUDIO	TV AUDIO
TV/VTR	TV/VTR
TXTON [L]	TEXT ON Ⓛ
U. REG45V	UNREGULATOR 45V
UNREG	UNREGULATOR
UNREG19V	UNREGULATOR 19V
V. REF	REFERENCE VOLTAGE
V. EE [H]	VIDEO EE Ⓗ
V. EE [L]	VIDEO EE Ⓛ
VCO REF	REFERENCE OSCILLATER
VD. IN	VIDEO SIGNAL INPUT
VD. OUT	VIDEO SIGNAL OUTPUT
VIDEO EE [L]	VIDEO EE Ⓛ
VIDEO IN	VIDEO SIGNAL INPUT
VIDEO OUT	VIDEO SIGNAL OUTPUT
VM	MOTOR VOLTAGE
VM DOWN [L]	MOTOR VOLTAGE DOWN Ⓛ
VSS	VERTICAL SYNC SIGNAL
VTR [H]	VTR Ⓗ
VTR. 12V	VTR 12V
X IN	OSCILLATOR INPUT
X OUT	OSCILLATOR OUTPUT

SYSTEM CONTROL & SERVO TRs DC VOLTAGE CHART (SP MODE)

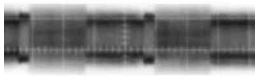
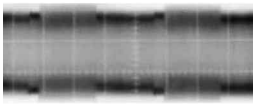
Ref. No.	Q1501			Q1502			Q6001			Q7702			Q7703		
MODE	+	–		+	–		E	C	B	E	C	B	E	C	B
STOP	4.7	0.0		4.9	0.0		4.3	3.9	0.0	0.0	4.9	0.0	0.0	0.0	0.6
PLAY	4.7	0.0		4.9	0.0		4.3	3.9	0.0	0.0	4.9	0.0	0.0	0.0	0.6
REC	4.6	0.0		4.8	0.0		4.3	3.9	0.0	0.0	4.9	0.0	0.0	0.0	0.5
F.F	4.7	0.0		4.9	0.0		4.3	3.9	0.0	0.0	4.9	0.0	0.0	0.0	0.5
REW	4.9	0.0		4.9	0.0		4.3	3.9	0.0	0.0	4.9	0.0	0.0	0.0	0.5

Ref. No.	Q7704			Q7705			Q7008		
MODE	E	C	B	E	C	B	E	C	B
STOP	0.0	4.2	0.0	1.3	5.0	1.9	1.6	0.0	0.9
PLAY	0.0	4.2	0.0	1.3	5.0	1.9	1.6	0.0	0.9
REC	0.0	4.2	0.0	1.3	5.0	1.9	1.6	0.0	0.9
F.F	0.0	4.2	0.0	1.3	5.0	1.9	1.6	0.0	0.9
REW	0.0	4.2	0.0	1.3	5.0	1.9	1.6	0.0	0.9

Ref. No.	QR6001			QR6003		
MODE	E	C	B	E	C	B
STOP	0.0	0.0	4.9	0.0	2.3	2.3
PLAY	0.0	12.3	0.0	0.0	2.3	2.3
REC	0.0	0.0	4.9	0.0	2.3	2.3
F.F	0.0	0.0	4.9	0.0	2.3	2.3
REW	0.0	0.0	4.9	0.0	2.3	2.3

SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (SP MODE)

Ref. No.	IC1501								IC1502											
MODE	1	2	3	4					1	2	3	4								
STOP	1.2	2.3	4.9	0.0					0.0	1.2	4.9	0.0								
PLAY	1.2	2.3	4.2	0.0					0.0	1.2	4.9	0.0								
REC	1.2	2.3	4.8	0.0					0.0	1.2	4.8	0.0								
F.F	1.2	2.3	2.2	0.0					0.0	1.2	2.4	0.0								
REW	1.2	2.3	2.4	0.0					0.0	1.2	2.3	0.0								
Ref. No.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.4	-0.1	4.9	0.9	4.9	1.1	1.0	2.4	-0.1	-0.1	1.0	2.6	0.3	1.8	1.8	3.4	15.7	3.4	-0.1	3.4
PLAY	3.5	-0.1	5.0	0.9	5.0	1.1	1.0	2.4	-0.1	-0.1	1.0	2.6	0.3	1.8	1.8	3.5	15.4	3.5	-0.1	3.5
REC	3.4	-0.1	4.9	0.9	4.9	1.1	1.0	2.4	-0.1	-0.1	1.0	2.6	0.2	1.8	1.8	3.5	15.4	3.4	-0.1	3.4
F.F	3.3	-0.1	5.0	0.9	5.0	1.1	1.0	2.4	-0.1	-0.1	1.0	2.6	0.3	1.8	1.8	3.3	15.1	3.3	-0.1	3.3
REW	3.5	-0.1	5.0	0.9	5.0	1.1	1.0	2.4	-0.1	-0.1	1.0	2.6	0.3	1.8	1.8	3.5	15.1	3.6	-0.1	3.4
Ref. No.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0.0	1.9	0.0	0.0	3.5	0.0	0.0	0.0	2.4	0.0	0.0	4.9	4.9	4.7	4.1	0.0	4.9	0.0	0.0	0.0
PLAY	4.7	1.8	0.0	0.0	3.9	0.0	0.0	0.0	2.4	0.0	4.3	4.9	4.9	4.6	0.1	0.0	0.0	0.0	0.0	0.0
REC	4.7	1.9	0.0	0.0	2.2	0.0	0.0	0.0	2.4	0.0	0.0	4.9	4.8	4.6	4.0	0.0	0.0	0.0	4.9	0.0
F.F	4.9	1.8	0.0	0.0	3.5	0.0	0.0	0.0	2.4	0.0	0.0	4.9	4.8	4.8	4.1	0.0	4.9	0.0	0.0	0.0
REW	4.9	1.8	0.0	0.0	3.4	0.0	0.0	0.0	2.4	0.0	0.0	4.9	4.9	4.6	4.1	0.0	4.9	0.0	0.0	0.0
Ref. No.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0.0	0.0	2.5	2.4	0.0	4.8	0.0	4.9	0.0	0.0	-	-	4.9	0.0	1.5	3.0	0.0	0.0	0.0	4.9
PLAY	2.4	0.0	4.9	2.4	2.4	4.8	0.0	0.0	0.0	0.0	-	-	4.9	0.0	1.5	3.0	4.9	0.0	0.0	4.9
REC	2.4	0.0	4.8	2.4	0.0	4.8	0.0	4.9	0.0	0.0	-	-	4.9	0.0	1.5	3.0	0.0	4.9	4.9	0.0
F.F	0.0	0.0	0.0	2.4	0.0	4.8	0.0	4.9	0.0	0.0	-	-	4.9	0.0	1.5	3.0	0.0	0.0	0.0	4.9
REW	0.0	0.0	0.0	2.4	0.0	4.8	0.0	4.9	0.0	0.0	-	-	4.9	0.0	1.5	3.0	0.0	0.0	0.0	4.9
Ref. No.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0.0	0.0	5.0	4.9	0.0	0.0	0.0	0.0	4.9	0.0	4.9	4.9	1.5	2.1	4.9	1.9	0.0	2.4	4.9	0.0
PLAY	0.0	0.0	5.0	4.9	0.0	0.0	0.0	0.0	4.9	0.0	4.9	4.9	1.5	2.1	4.9	1.9	0.0	2.4	4.9	0.0
REC	0.0	4.9	5.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	4.9	4.9	1.5	2.1	4.8	1.9	0.0	2.4	4.9	0.0
F.F	0.0	0.0	5.0	4.9	4.9	0.0	0.0	0.0	4.9	0.0	4.9	4.9	1.5	2.1	4.9	1.9	0.0	2.5	4.9	0.0
REW	0.0	0.0	5.0	4.9	4.9	0.0	0.0	0.0	4.9	0.0	4.9	4.9	1.5	2.1	4.9	1.9	0.0	2.4	4.9	0.0
Ref. No.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	1.9	2.1	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	4.9	4.9	0.0	0.0	0.0	5.2	5.2	0.0	0.0	2.7
PLAY	1.9	2.1	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	4.9	4.8	0.0	0.0	0.0	5.2	5.2	0.0	2.4	2.4
REC	1.9	2.1	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	4.9	4.8	0.0	0.0	0.0	5.2	5.2	0.0	2.4	2.4
F.F	1.9	2.1	0.0	0.0	0.0	0.0	0.0	0.4	1.6	0.0	4.9	4.8	0.0	0.0	0.0	5.2	5.2	0.0	2.9	2.4
REW	1.9	2.1	0.0	0.0	0.0	0.0	0.0	0.4	1.6	0.0	4.9	4.8	0.0	0.0	0.0	5.2	5.2	0.0	2.9	2.4
Ref. No.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	4.9	4.9	4.9	2.4	4.9	4.9	4.9	4.9	4.8	4.8	4.1	4.1
PLAY	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.0	4.9	4.9	4.9	2.4	4.1	4.8	4.9	4.9	4.8	4.8	4.2	4.1
REC	0.0	0.4	0.0	0.0	4.5	0.0	0.0	0.0	4.9	4.9	4.9	2.4	4.2	4.8	4.9	4.9	4.8	4.8	4.1	4.0
F.F	0.0	4.8	0.0	0.0	0.3	0.0	0.0	0.0	4.9	4.9	4.9	2.4	2.3	2.3	4.9	4.9	4.8	4.8	4.2	4.1
REW	0.0	4.8	4.9	0.0	0.3	0.0	0.0	0.0	4.9	4.9	4.9	2.4	2.2	2.3	4.9	4.9	4.8	4.8	4.2	4.1
Ref. No.	IC6001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116				
STOP	0.0	0.0	2.5	2.5	0.0	0.0	4.9	2.5	2.5	0.0	2.5	2.5	2.5	2.5	4.9	4.9				
PLAY	0.0	0.0	2.5	2.5	0.0	0.0	1.1	2.5	2.5	0.0	2.5	2.5	2.5	2.5	4.9	4.9				
REC	0.0	0.0	2.4	2.4	0.0	0.0	1.0	2.4	2.4	0.0	1.9	2.3	2.5	2.5	4.9	4.9				
F.F	0.0	0.0	2.5	2.5	0.0	0.0	1.0	2.5	2.5	0.0	2.5	2.5	2.5	2.5	5.0	5.0				
REW	0.0	0.0	2.5	2.5	0.0	0.0	1.1	2.5	2.5	0.0	2.5	2.5	2.5	2.5	5.0	5.0				
Ref. No.	IC7701																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0.0	0.0	0.0	4.8	4.8	0.0	0.4	0.0	4.9	2.5	0.0	2.5	0.0	2.5	2.5	1.5	1.3	0.0	4.9	4.9
PLAY	0.0	0.0	0.0	4.8	4.8	0.0	0.4	0.0	4.9	3.0	0.0	3.1	0.0	3.5	3.1	1.5	1.3	0.0	4.9	4.9
REC	0.0	0.0	0.0	4.8	4.8	0.0	0.4	0.0	4.9	2.4	0.0	2.5	0.0	2.5	2.5	1.5	1.3	0.0	4.9	4.9
F.F	0.0	0.0	0.0	4.8	4.8	0.0	0.4	0.0	4.9	2.5	0.0	2.5	0.0	2.5	2.5	1.5	1.3	0.0	4.9	4.9
REW	0.0	0.0	0.0	4.8	4.8	0.0	0.4	0.0	4.9	2.5	0.0	2.5	0.0	2.5	2.5	1.5	1.3	0.0	4.9	4.9
Ref. No.	IC7503						IC7504													
MODE	1	2	3	4	5		1	2	3											
STOP	4.8	4.8	-0.1	0.0	4.3		5.2	-0.1	5.2											
PLAY	4.8	4.8	-0.1	0.0	4.3		5.2	-0.1	5.2											
REC	4.8	4.8	-0.1	0.0	4.3		5.2	-0.1	5.2											
F.F	4.8	4.8	-0.1	0.0	4.3		5.2	-0.1	5.2											
REW	4.8	4.8	-0.1	0.0	4.3		5.2	-0.1	5.2											
Ref. No.	IC7702																			
MODE	1	2	3	4	5	6	7	8												
STOP	0.0	0.0	0.0	0.0	4.8	4.8	4.9	4.9												
PLAY	0.0	0.0	0.0	0.0	4.8	4.8	4.9	4.9												
REC	0.0	0.0	0.0	0.0	4.8	4.8	4.9	4.9												
F.F	0.0	0.0	0.0	0.0	4.8	4.8	4.9	4.9												
REW	0.0	0.0	0.0	0.0	4.8	4.8	4.9	4.9												

 IC3501-30 PLAY 0.4Vp-p (5msec.div.)	 IC3501-31 REC 0.3Vp-p (5msec.div.)			

T1150-3 STOP
190Vp-p (5msec.div.)

T1150-5 STOP
500Vp-p (5usec.div.)

T1150-7 STOP
36Vp-p (5usec.div.)

T1150-14 STOP
100Vp-p (5usec.div.)

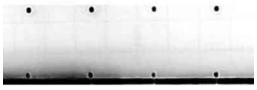
T1150-16 STOP
1.8Vp-p (5usec.div.)

T1150-17 STOP
2.2Vp-p (5usec.div.)

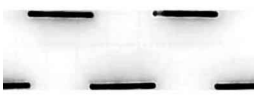
T1150-18 STOP
3.4Vp-p (5usec.div.)

T1150-19 STOP
5.2Vp-p (5usec.div.)

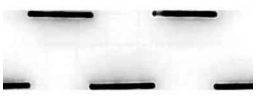
T1150-20 STOP
125Vp-p (5usec.div.)



IC6001-20 PAUSE
4.4Vp-p (10msec.div.)



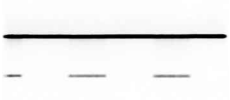
IC6001-21 REC
4.4Vp-p (10msec.div.)



IC6001-24 REC
4.4Vp-p (10msec.div.)

IC6001-61 REC
2.0Vp-p (10usec.div.)

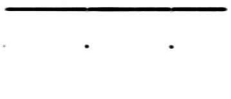
IC6001-68 REC
4.4Vp-p (10msec.div.)



IC6001-89 REC
4.6Vp-p (10msec.div.)

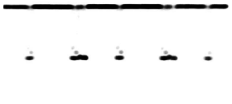
IC6001-90,91 REC
5.2Vp-p (10msec.div.)

IC6001-93,94 FF/REW
5.0Vp-p (1msec.div.)



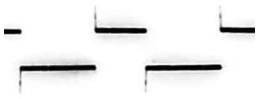
IC6001-97,98 REC
4.8Vp-p (10msec.div.)

IC6001-99 REC
4.8Vp-p (10msec.div.)



IC6001-100 REC
4.8Vp-p (10msec.div.)

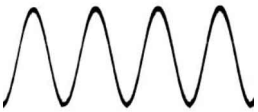
IC6001-107 REC
5.0Vp-p (10msec.div.)



IC6001-111,112 REC
6.0Vp-p (10msec.div.)

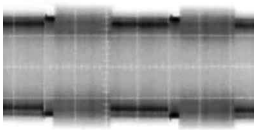
IC6001-114 PLAY
4.2Vp-p (10msec.div.)

IC2501-1,18,20 REC
8.4Vp-p (5msec.div.)

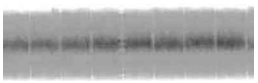


IC3001-2 REC
1.2Vp-p (5msec.div.)

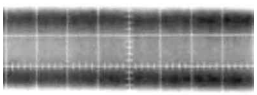
IC3001-4 PLAY
5.0Vp-p (5msec.div.)



IC3001-14 REC
0.4Vp-p (20usec.div.)



IC3001-15 PLAY
0.5Vp-p (20usec.div.)



IC3001-20 PLAY
150mVp-p (20usec.div.)

IC3001-24 REC/PLAY
4.7Vp-p (10msec.div.)

IC3001-37 REC/PLAY
4.8Vp-p (5msec.div.)

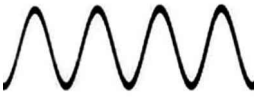
IC3001-38 REC/PLAY
4.6Vp-p (5msec.div.)

IC3001-42,43 PLAY
0.4Vp-p (5msec.div.)

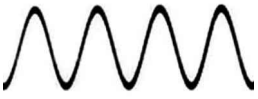
IC3001-48,50 REC
1.2Vp-p (5msec.div.)

IC3001-52 REC/PLAY
2.4Vp-p (5msec.div.)

IC3001-78 REC/PLAY
1.2Vp-p (5msec.div.)

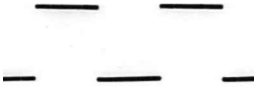


IC4501-9,14 REC
1.2Vp-p (5msec.div.)



IC4501-21 REC
1.2Vp-p (5msec.div.)

IC4501-53,57 REC/PLAY
1.2Vp-p (5msec.div.)



IC3501-1 REC/PLAY
4.6Vp-p (10msec.div.)

INPUT CONDITION								Video Output Result LA73021 setting								Audio Output Results AN3655 settings							Mute signals	
POWER	AV2 SELECT	EE/ VV	DVD/VCR MODE	OSD ON(H)	DVD RGB	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	DVD/AV2 SELECT	Video to YC	YC INPUT	YC-out OUT	AV1 Out	AV2 Out	RF (C)	REC/ PB	Input Select	AV1 output Select	AV2 output Select	Mute (H)	A-Mute (H)
	Function menu				Functio n menu		AV2-8 in	V-OUTSEL	V-DECSEL	AV1-8	AV2-8 out	RGB OFF(H)	DVD(L)	V-INSEL	YC-INSEL	YC-out				A-REC/PB	A-INSEL	A-OUTSEL	A-DECSEL		not used
OFF	---	---	---	---	---	---	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
							M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
VPS	EXT	---	VCR	L	---	NO.TU	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
STAND						DVD	M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
BY	EXT LINK 1					AV1	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV2IN	AV1IN	Mute	REC	AV1in (001)	BSmon	AV1in	L	H
							M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV1(010)	CH2	AV1	AV2IN	AV1IN	Mute	REC	AV1in (001)	BSmon	AV1in	L	H
or	or					AV2	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	Mute	REC	AV2in (010)	BSmon	AV1in	L	H
							M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	Mute	REC	AV2in (010)	BSmon	AV1in	L	H
EXT	EXT LINK 2					AV3	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV2IN	AV1IN	Mute	REC	AV3in (011)	BSmon	AV1in	L	H
LINK							M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	MUTE	CH3	AV3	AV2IN	AV1IN	Mute	REC	AV3in (011)	BSmon	AV1in	L	H
STAND				H	---	NO.TU	L	VCR OUT(1-)	VCR OUT(00)	H	H	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	Mute	Mute	Mute	REC	TUN (000)	Hifi,Mix,Nor	AV1in	H	H
BY						AV1	L	VCR OUT(1-)	VCR OUT(00)	H	H	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	Mute	Mute	Mute	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	H	H
						AV2	L	VCR OUT(1-)	VCR OUT(00)	H	H	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	Mute	Mute	Mute	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	H	H
						AV3	L	VCR OUT(1-)	VCR OUT(00)	H	H	OFF(1)	H (AV2)	MUTE	CH3	AV3	Mute	Mute	Mute	REC	AV3in (011)	Hifi,Mix,Nor	AV1in	H	H
			DVD	---	OFF	NO.TU	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
						DVD	M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
						AV1	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	OFF(1)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
							M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	OFF(1)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
						AV2	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
							M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
						AV3	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	OFF(1)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
							M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	OFF(1)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
					ON	NO.TU	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
						DVD	M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
						AV1	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	ON(0)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
							M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	ON(0)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
						AV2	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
							M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
						AV3	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	ON(0)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
							M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	ON(0)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
	DECODER	---	VCR	L	---	NO.TU	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
							M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
						AV1	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV2IN	AV1IN	Mute	REC	AV1in (001)	BSmon	AV1in	L	H
							M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	Mute	REC	AV2in (010)	BSmon	AV1in	L	H
						AV2	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	Mute	REC	AV2in (010)	BSmon	AV1in	L	H
							M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	Mute	REC	AV2in (010)	BSmon	AV1in	L	H
						AV3	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV2IN	AV1IN	Mute	REC	AV3in (011)	BSmon	AV1in	L	H
							M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	MUTE	CH3	AV3	AV2IN	AV1IN	Mute	REC	AV3in (011)	BSmon	AV1in	L	H
				H	---	NO.TU	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	Mute	Mute	Mute	REC	TUN (000)	Hifi,Mix,Nor	AV1in	H	H
						AV1	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	Mute	Mute	Mute	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	H	H
							M/H	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	Mute	Mute	Mute	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	H	H
						AV2	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	Mute	Mute	Mute	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	H	H
						AV3	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	Mute	Mute	Mute	REC	AV3in (011)	Hifi,Mix,Nor	AV1in	H	H
			DVD	---	OFF	NO.TU	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	AV1IN	DVD	REC	TUN (000)	Nor (10)	AV1in	L	L
						AV1	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV1(010)	CH2	AV1	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
							M/H	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
						AV2	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV2in (010)	Nor (10)	AV1in	L	L
						AV3	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	MUTE	CH3	AV3	DVD	AV1IN	DVD	REC	AV3in (011)	Nor (10)	AV1in	L	L

INPUT CONDITION								Video Output Result LA73021 setting								Audio Output Results AN3655 settings							Mute signals	
POWER	AV2 SELECT	EE/ VV	DVD/VCR MODE	OSD ON(H)	DVD RGB	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	DVD/AV2 SELECT	Video to YC	YC INPUT	YC-out OUT	AV1 Out	AV2 Out	RF (C)	REC/ PB	Input Select	AV1 output Select	AV2 output Select	Mute (H)	A-Mute (H)
	Function menu				Function menu		AV2-8 in	V-OUTSEL	V-DECSEL	AV1-8	AV2-8 out	RGB OFF(H)	DVD(L)	V-INSEL	YC-INSEL	YC-out				A-REC/PB	A-INSEL	A-OUTSEL	A-DECSEL		not used
					ON	NO.TU	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	AV1IN	DVD	REC	TUN (000)	Nor (10)	AV1in	L	L
						AV1	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV1(010)	CH2	AV1	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
							M/H	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
						AV2	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV2in (010)	Nor (10)	AV1in	L	L
						AV3	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	MUTE	CH3	AV3	DVD	AV1IN	DVD	REC	AV3in (011)	Nor (10)	AV1in	L	L
P.ON	EXT	EE	VCR	L	---	NO.TU	---	VCR OUT(1-)	VCR OUT(00)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
	or					AV1	---	VCR OUT(1-)	VCR OUT(00)	L	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	OUTSEL	L	L
						AV2	---	VCR OUT(1-)	VCR OUT(00)	L	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV2IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	OUTSEL	L	L
						AV3	---	VCR OUT(1-)	VCR OUT(00)	L	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV3IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	OUTSEL	L	L
	EXTLINK1				OFF	DVD	---	VCR OUT(1-)	VCR OUT(00)	L	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
				NO	ON	DVD	---	VCR OUT(1-)	VCR OUT(00)	L	L	ON(0)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
				ANY		DVD	---	VCR OUT(1-)	VCR OUT(00)	L	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
	or			H	---	NO.TU	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
	EXTLINK2					AV1	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	OUTSEL	L	L
						AV2	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV2IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	OUTSEL	L	L
						AV3	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV3IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	OUTSEL	L	L
						DVD	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
		VV	VCR	L	---	NO.TU	---	VCR OUT(1-)	VCR OUT(00)	*6[M/H]	*6[M/H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
						AV1	---	VCR OUT(1-)	VCR OUT(00)	*6[M/H]	*6[M/H]	OFF(1)	H (AV2)	AV1(010)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV1in (001)	Hifi,Mix,Nor	OUTSEL	L	L
						AV2	---	VCR OUT(1-)	VCR OUT(00)	*6[M/H]	*6[M/H]	OFF(1)	H (AV2)	AV2(011)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV2in (010)	Hifi,Mix,Nor	OUTSEL	L	L
						AV3	---	VCR OUT(1-)	VCR OUT(00)	*6[M/H]	*6[M/H]	OFF(1)	H (AV2)	MUTE	CH3	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV3in (011)	Hifi,Mix,Nor	OUTSEL	L	L
						DVD	---	VCR OUT(1-)	VCR OUT(00)	*6[M/H]	*6[M/H]	OFF(1)	H (AV2)	DVD(000)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
				H	---	NO.TU	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
						AV1	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	AV1(010)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV1in (001)	Hifi,Mix,Nor	OUTSEL	L	L
						AV2	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	AV2(011)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV2in (010)	Hifi,Mix,Nor	OUTSEL	L	L
						AV3	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	MUTE	CH3	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV3in (011)	Hifi,Mix,Nor	OUTSEL	L	L
						DVD	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	DVD(000)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
		EE	DVD	---	OFF	NO.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
						AV1	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
						AV2	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*3	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
						AV3	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
				NO		DVD	---	DVD OUT(00)	DVD OUT(00)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Nor (10)	DVD(EXT4)	L	L
				ANY		DVD	---	VCR OUT(1-)	VCR OUT(00)	H(1)	*2[H]	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Nor (10)	DVD(EXT4)	L	L
					ON	NO.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
						AV1	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
						AV2	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*3	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
						AV3	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
				NO		DVD	---	DVD OUT(00)	DVD OUT(00)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Nor (10)	DVD(EXT4)	L	L
				ANY		DVD	---	VCR OUT(1-)	VCR OUT(00)	H(1)	*2[H]	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Nor (10)	DVD(EXT4)	L	L
		VV	DVD	---	OFF	NO.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	DVD	DVD	PB VHS	TUN (000)	Nor (10)	DVD(EXT4)	L	L
						AV1	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	AV1(010)	CH2	PB	DVD	DVD	DVD	PB VHS	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
						AV2	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	AV2(011)	CH2	PB	DVD	DVD	DVD	PB VHS	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
						AV3	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	MUTE	CH3	PB	DVD	DVD	DVD	PB VHS	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
						DVD	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	DVD(000)	CH2	PB	DVD	DVD	DVD	PB VHS	DVD (100)	Nor (10)	DVD(EXT4)	L	L
					ON	NO.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	DVD	DVD	PB VHS	TUN (000)	Nor (10)	DVD(EXT4)	L	L
						AV1	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	AV1(010)	CH2	PB	DVD	DVD	DVD	PB VHS	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
						AV2	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	AV2(011)	CH2	PB	DVD	DVD	DVD	PB VHS	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
						AV3	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	MUTE	CH3	PB	DVD	DVD	DVD	PB VHS	AV3in (011)	Nor (10)	DVD(EXT4)	L	L

INPUT CONDITION								Video Output Result LA73021 setting								Audio Output Results AN3655 settings							Mute signals	
POWER	AV2 SELECT	EE/ VV	DVD/VCR MODE	OSD ON(H)	DVD RGB	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	DVD/AV2 SELECT	Video to YC	YC INPUT	YC-out OUT	AV1 Out	AV2 Out	RF (C)	REC/ PB	Input Select	AV1 output Select	AV2 output Select	Mute (H)	A-Mute (H)
	Function menu				Function menu		AV2-8 in	V-OUTSEL	V-DECSEL	AV1-8	AV2-8 out	RGB OFF(H)	DVD(L)	V-INSEL	YC-INSEL	YC-out				A-REC/PB	A-INSEL	A-OUTSEL	A-DECSEL		not used
						DVD	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	DVD(000)	CH2	PB	DVD	DVD	DVD	PB VHS	DVD (100)	Nor (10)	DVD(EXT4)	L	L
P.ON	DECODER	EE	VCR	L	---	NO.TU	L	VCR OUT(1-)	TUN IN(10)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	TUN	L	L
							M/H	VCR OUT(1-)	TUN IN(10)	L	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	TUN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	TUN	L	L
						AV1	L	VCR OUT(1-)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	L	L
							M/H	VCR OUT(1-)	AV1 IN(01)	L	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
						AV2	---	VCR OUT(1-)	AV1 IN(01)	L	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
						AV3	---	VCR OUT(1-)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV1IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	AV1in	L	L
						DVD	---	VCR OUT(1-)	AV1 IN(01)	L	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
				H	---	NO.TU	L	VCR OUT(1-)	TUN IN(10)	H	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	TUN	L	L
							M/H	VCR OUT(1-)	TUN IN(10)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	TUN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	TUN	L	L
						AV1	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	L	L
							M/H	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
						AV2	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
						AV3	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV1IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	AV1in	L	L
						DVD	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
		VV	VCR	---	---	NO.TU	L	VCR OUT(1-)	TUN IN(10)	*6[M/H]	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	PB	PB	TUN	PB	PB VHS	TUN (000)	Hifi,Mix,Nor	TUN	L	L
							M/H	VCR OUT(1-)	TUN IN(10)	*6[M/H]	L	OFF(1)	H (AV2)	AV2(011)	CH2	PB	PB	TUN	PB	PB VHS	AV2in (010)	Hifi,Mix,Nor	TUN	L	L
						AV1	---	VCR OUT(1-)	AV1 IN(01)	*6[M/H]	L	OFF(1)	H (AV2)	AV1(010)	CH2	PB	PB	AV1IN	PB	PB VHS	AV1in (001)	Hifi,Mix,Nor	AV1in	L	L
						AV2	---	VCR OUT(1-)	AV1 IN(01)	*6[M/H]	L	OFF(1)	H (AV2)	AV2(011)	CH2	PB	PB	AV1IN	PB	PB VHS	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
						AV3	---	VCR OUT(1-)	AV1 IN(01)	*6[M/H]	L	OFF(1)	H (AV2)	MUTE	CH3	PB	PB	AV1IN	PB	PB VHS	AV3in (011)	Hifi,Mix,Nor	AV1in	L	L
						DVD	---	VCR OUT(1-)	AV1 IN(01)	*6[M/H]	L	OFF(1)	H (AV2)	DVD(000)	CH2	PB	PB	AV1IN	PB	PB VHS	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
P.ON	DECODER	EE	DVD	---	OFF	NO.TU	L	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	TUN	DVD	REC	TUN (000)	Nor (10)	TUN	L	L
							M/H	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	TUN	DVD	REC	AV2in (010)	Nor (10)	TUN	L	L
						AV1	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV1(010)	CH2	AV1	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
						AV2	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV2in (010)	Nor (10)	AV1in	L	L
						AV3	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	MUTE	CH3	AV3	DVD	AV1IN	DVD	REC	AV3in (011)	Nor (10)	AV1in	L	L
				NO		DVD	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Nor (10)	AV1in	L	L
				ANY		DVD	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
					ON	NO.TU	L	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	TUN	DVD	REC	TUN (000)	Nor (10)	TUN	L	L
							M/H	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	TUN	DVD	REC	AV2in (010)	Nor (10)	TUN	L	L
						AV1	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV1(010)	CH2	AV1	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
						AV2	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV2in (010)	Nor (10)	AV1in	L	L
						AV3	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	MUTE	CH3	AV3	DVD	AV1IN	DVD	REC	AV3in (011)	Nor (10)	AV1in	L	L
				NO		DVD	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Nor (10)	AV1in	L	L
				ANY		DVD	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
		VV	DVD	---	OFF	NO.TU	L	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	TUN	DVD	PB VHS	TUN (000)	Nor (10)	TUN	L	L
							M/H	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	PB	DVD	TUN	DVD	PB VHS	AV2in (010)	Nor (10)	TUN	L	L
						AV1	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV1(010)	CH2	PB	DVD	AV1IN	DVD	PB VHS	AV1in (001)	Nor (10)	AV1in	L	L
						AV2	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	PB	DVD	AV1IN	DVD	PB VHS	AV2in (010)	Nor (10)	AV1in	L	L
						AV3	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	MUTE	CH3	PB	DVD	AV1IN	DVD	PB VHS	AV3in (011)	Nor (10)	AV1in	L	L
						DVD	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	DVD(000)	CH2	PB	DVD	AV1IN	DVD	PB VHS	DVD (100)	Nor (10)	AV1in	L	L
					ON	NO.TU	L	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	TUN	DVD	PB VHS	TUN (000)	Nor (10)	TUN	L	L
							M/H	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	PB	DVD	TUN	DVD	PB VHS	AV2in (010)	Nor (10)	TUN	L	L
						AV1	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV1(010)	CH2	PB	DVD	AV1IN	DVD	PB VHS	AV1in (001)	Nor (10)	AV1in	L	L
						AV2	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	PB	DVD	AV1IN	DVD	PB VHS	AV2in (010)	Nor (10)	AV1in	L	L
						AV3	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	MUTE	CH3	PB	DVD	AV1IN	DVD	PB VHS	AV3in (011)	Nor (10)	AV1in	L	L
						DVD	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	DVD(000)	CH2	PB	DVD	AV1IN	DVD	PB VHS	DVD (100)	Nor (10)	AV1in	L	L

INPUT CONDITION								Video Output Result LA73021 setting								Audio Output Results			AN3655 settings				Mute signals	
POWER	AV2 SELECT	EE/ VV	DVD/VCR MODE	OSD ON(H)	DVD RGB	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	DVD/AV2 SELECT	Video to YC	YC INPUT	YC-out OUT	AV1 Out	AV2 Out	RF (C)	REC/ PB	Input Select	AV1 output Select	AV2 output Select	Mute (H)	A-Mute (H)
	Function menu				Functio n menu		AV2-8 in	V-OUTSEL	V-DECSEL	AV1-8	AV2-8 out	RGB OFF(H)	DVD(L)	V-INSEL	YC-INSEL	YC-out				A-REC/PB	A-INSEL	A-OUTSEL	A-DECSEL		not used

Remark:

NO.TU	Tuner position, DECODER OFF (e.g. ARD)
C+TU	Tuner position, DECODER ON (e.g. PREMI)
RGW SW	OFF = HIGH
RGW SW	ON = LOW
EE	Non-Playback signal
VV	Playback signal
INSEL	Inputselect= Audio Output signal from AN3655 at Line Out
***1[L]**	**In case of Personal Planner standby(not External Link), AV1 PB must not output 'M' or 'H'**
***2[H*] / *6[M/H]**	**AV2 PB must not output 'M' or 'H' if AV2 PB IN is 'M' or 'H'.**
***3**	**In case of EXT LINK (1/2) mode or normal REC from AV2 AV2 PB(H) should be low, in case of ex. EXTLINK (1/2) or normal REC AV2follow the result of DVD.**
***4**	**In case of EXT LINK (1/2) mode AV2 PB(H) should be low, in case of ex. EXTLINK (1/2) follow the result of DVD.**
***5[M/H]**	**State of AV PB should be decided by 16:9 information from DVD.**
***6[M/H]**	**State of AV2PB output should be decided by distinction of PB CTL.**
***7[M/H]**	**State of AV1PB output should be decided by result of AV2PB input.**

INPUT CONDITION									Video Output Result LA73021 setting									Audio Output Results			AN3655 settings				Mute signals	
POWER	AV2 SELECT	TV/ VTR	EE/ VV	DVD/VCR MODE	OSD ON(H)	DVD RGB	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	DVD/AV2 SELECT	Video to YC	YC INPUT	YC-out OUT	AV1 Out	AV2 Out	RF (C)	REC/ PB	Input Select	AV1 output Select	AV2 output Select	Mute (H)	A-Mute (H)
	Function menu	AV link				Function menu		AV2-8 in	V-OUTSEL	V-DECSEL	AV1-8	AV2-8 out	RGB OFF(H)	DVD(L)	V-INSEL	CH1/CH2 INSEL	YC-out				A-REC/PB	A-INSEL	A-OUTSEL	A-DECSEL		not used
OFF	---	---	---	---	---	---	---	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
VPS STAND BY or EXT LINK STAND BY	EXT or EXT LINK 1 or EXT LINK 2	---	---	VCR	L	---	NO.TU	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
							DVD	M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
							C+.TU	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
							AV1	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV2IN	AV1IN	Mute	REC	AV1in (001)	BSmon	AV1in	L	H
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV1(010)	CH2	AV1	AV2IN	AV1IN	Mute	REC	AV1in (001)	BSmon	AV1in	L	H
							AV2	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	Mute	REC	AV2in (010)	BSmon	AV1in	L	H
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	Mute	REC	AV2in (010)	BSmon	AV1in	L	H
							AV3	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV2IN	AV1IN	Mute	REC	AV3in (011)	BSmon	AV1in	L	H
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	MUTE	CH3	AV3	AV2IN	AV1IN	Mute	REC	AV3in (011)	BSmon	AV1in	L	H
					H	---	NO.TU	---	VCR OUT(1-)	VCR OUT(00)	H	H	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	Mute	Mute	Mute	REC	TUN (000)	Hifi,Mix,Nor	AV1in	H	H
							C+.TU	---	VCR OUT(1-)	VCR OUT(00)	H	H	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	Mute	Mute	Mute	REC	TUN (000)	Hifi,Mix,Nor	AV1in	H	H
							AV1	---	VCR OUT(1-)	VCR OUT(00)	H	H	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	Mute	Mute	Mute	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	H	H
							AV2	---	VCR OUT(1-)	VCR OUT(00)	H	H	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	Mute	Mute	Mute	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	H	H
							AV3	---	VCR OUT(1-)	VCR OUT(00)	H	H	OFF(1)	H (AV2)	MUTE	CH3	AV3	Mute	Mute	Mute	REC	AV3in (011)	Hifi,Mix,Nor	AV1in	H	H
				DVD	---	OFF	NO.TU	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							DVD	M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							C+.TU	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
								M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							AV1	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	OFF(1)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
								M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	OFF(1)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
							AV2	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
								M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
							AV3	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	OFF(1)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
								M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	OFF(1)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
						ON	NO.TU	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							DVD	M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							C+.TU	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
								M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							AV1	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	ON(0)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
								M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	ON(0)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
							AV2	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
								M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
							AV3	L	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*4	ON(0)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
								M/H	DVD OUT(00)	DVD OUT(11)	*5[M/H]	L	ON(0)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
	DECODER	---	---	VCR	L	---	NO.TU	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
							C+.TU	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	Mute	REC	TUN (000)	BSmon	AV1in	L	H
							AV1	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV2IN	AV1IN	Mute	REC	AV1in (001)	BSmon	AV1in	L	H
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	Mute	REC	AV2in (010)	BSmon	AV1in	L	H
							AV2	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	Mute	REC	AV2in (010)	BSmon	AV1in	L	H
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	Mute	REC	AV2in (010)	BSmon	AV1in	L	H
							AV3	L	AV2 IN(01)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV2IN	AV1IN	Mute	REC	AV3in (011)	BSmon	AV1in	L	H
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	MUTE	CH3	AV3	AV2IN	AV1IN	Mute	REC	AV3in (011)	BSmon	AV1in	L	H
					H	---	NO.TU	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	Mute	Mute	Mute	REC	TUN (000)	Hifi,Mix,Nor	AV1in	H	H
							C+.TU	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	Mute	Mute	Mute	REC	TUN (000)	Hifi,Mix,Nor	AV1in	H	H

INPUT CONDITION								Video Output Result LA73021 setting									Audio Output Results			AN3655 settings				Mute signals	
POWER	AV2 SELECT	TV/ VTR	EE/ VV	DVD/VCR MODE	OSD ON(H)	DVD RGB	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	DVD/AV2 SELECT	Video to YC	YC INPUT	YC-out OUT	AV1 Out	AV2 Out	RF (C)	REC/ PB	Input Select	AV1 output Select	AV2 output Select	Mute (H)	A-Mute (H)
	Function menu	AV link				Function menu		AV2-8 in	V-OUTSEL	V-DECSEL	AV1-8	AV2-8 out	RGB OFF(H)	DVD(L)	V-INSEL	YC-INSEL	YC-out				A-REC/PB	A-INSEL	A-OUTSEL	A-DECSEL		not used
							AV1	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	Mute	Mute	Mute	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	H	H
								M/H	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	Mute	Mute	Mute	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	H	H
							AV2	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	Mute	Mute	Mute	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	H	H
							AV3	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	Mute	Mute	Mute	REC	AV3in (011)	Hifi,Mix,Nor	AV1in	H	H
				DVD	---	OFF	NO.TU	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	AV1IN	DVD	REC	TUN (000)	Nor (10)	AV1in	L	L
							C+.TU	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	AV1IN	DVD	REC	TUN (000)	Nor (10)	AV1in	L	L
							AV1	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV1(010)	CH2	AV1	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
								M/H	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
							AV2	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV2in (010)	Nor (10)	AV1in	L	L
							AV3	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	MUTE	CH3	AV3	DVD	AV1IN	DVD	REC	AV3in (011)	Nor (10)	AV1in	L	L
						ON	NO.TU	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	AV1IN	DVD	REC	TUN (000)	Nor (10)	AV1in	L	L
							C+.TU	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	AV1IN	DVD	REC	TUN (000)	Nor (10)	AV1in	L	L
							AV1	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV1(010)	CH2	AV1	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
								M/H	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
							AV2	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV2in (010)	Nor (10)	AV1in	L	L
							AV3	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	MUTE	CH3	AV3	DVD	AV1IN	DVD	REC	AV3in (011)	Nor (10)	AV1in	L	L
P.ON	EXT	TV	EE	VCR	L	---	NO.TU	---	VCR OUT(1-)	VCR OUT(00)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
							C+.TU	---	VCR OUT(1-)	VCR OUT(00)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
	or						AV1	---	VCR OUT(1-)	VCR OUT(00)	L	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	OUTSEL	L	L
							AV2	---	VCR OUT(1-)	VCR OUT(00)	L	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV2IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	OUTSEL	L	L
	EXTLINK1						AV3	---	VCR OUT(1-)	VCR OUT(00)	L	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV3IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	OUTSEL	L	L
							DVD	---	VCR OUT(1-)	VCR OUT(00)	L	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
	or				H	---	NO.TU	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
							C+.TU	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
	EXTLINK2						AV1	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	OUTSEL	L	L
							AV2	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV2IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	OUTSEL	L	L
							AV3	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV3IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	OUTSEL	L	L
							DVD	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
		VTR	EE	VCR	L	---	NO.TU	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
							C+.TU	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
							AV1	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	OUTSEL	L	L
							AV2	L	VCR OUT(1-)	VCR OUT(00)	H	H	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV2IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	OUTSEL	L	L
								M/H	VCR OUT(1-)	VCR OUT(00)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV2IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	OUTSEL	L	L
							AV3	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV3IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	OUTSEL	L	L
						OFF	DVD	---	VCR OUT(1-)	VCR OUT(00)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
					NO	ON	DVD	---	VCR OUT(1-)	VCR OUT(00)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
					ANY		DVD	---	VCR OUT(1-)	VCR OUT(00)	H(1)	*2[H]	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
					H	---	NO.TU	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
							C+.TU	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
							AV1	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	OUTSEL	L	L
							AV2	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV2IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	OUTSEL	L	L
							AV3	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV3IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	OUTSEL	L	L
							DVD	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
			VV	VCR	L	---	NO.TU	---	VCR OUT(1-)	VCR OUT(00)	*6[M/H]	*6[M/H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
							C+.TU	---	VCR OUT(1-)	VCR OUT(00)	*6[M/H]	*6[M/H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
							AV1	---	VCR OUT(1-)	VCR OUT(00)	*6[M/H]	*6[M/H]	OFF(1)	H (AV2)	AV1(010)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV1in (001)	Hifi,Mix,Nor	OUTSEL	L	L
							AV2	---	VCR OUT(1-)	VCR OUT(00)	*6[M/H]	*6[M/H]	OFF(1)	H (AV2)	AV2(011)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV2in (010)	Hifi,Mix,Nor	OUTSEL	L	L
							AV3	---	VCR OUT(1-)	VCR OUT(00)	*6[M/H]	*6[M/H]	OFF(1)	H (AV2)	MUTE	CH3	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV3in (011)	Hifi,Mix,Nor	OUTSEL	L	L
							DVD	---	VCR OUT(1-)	VCR OUT(00)	*6[M/H]	*6[M/H]	OFF(1)	H (AV2)	DVD(000)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L

INPUT CONDITION								Video Output Result LA73021 setting										Audio Output Results			AN3655 settings				Mute signals	
POWER	AV2 SELECT	TV/ VTR	EE/ VV	DVD/VCR MODE	OSD ON(H)	DVD RGB	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	DVD/AV2 SELECT	Video to YC	YC INPUT	YC-out OUT	AV1 Out	AV2 Out	RF (C)	REC/ PB	Input Select	AV1 output Select	AV2 output Select	Mute (H)	A-Mute (H)
	Function menu	AV link				Function menu		AV2-8 in	V-OUTSEL	V-DECSEL	AV1-8	AV2-8 out	RGB OFF(H)	DVD(L)	V-INSEL	YC-INSEL	YC-out				A-REC/PB	A-INSEL	A-OUTSEL	A-DECSEL		not used
					H	---	NO.TU	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
							C+.TU	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	TUN (000)	Hifi,Mix,Nor	OUTSEL	L	L
							AV1	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	AV1(010)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV1in (001)	Hifi,Mix,Nor	OUTSEL	L	L
							AV2	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	AV2(011)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV2in (010)	Hifi,Mix,Nor	OUTSEL	L	L
							AV3	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	MUTE	CH3	PB	PB VHS	PB VHS	PB VHS	PB VHS	AV3in (011)	Hifi,Mix,Nor	OUTSEL	L	L
							DVD	---	VCR OUT(1-)	VCR OUT(00)	H	*2[H]	OFF(1)	H (AV2)	DVD(000)	CH2	PB	PB VHS	PB VHS	PB VHS	PB VHS	DVD (100)	Hifi,Mix,Nor	OUTSEL	L	L
		---	EE	DVD	---	OFF	NO.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							C+.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							AV1	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
							AV2	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*3	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
							AV3	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
					NO		DVD	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Nor (10)	DVD(EXT4)	L	L
					ANY		DVD	---	VCR OUT(1-)	VCR OUT(00)	H(1)	*2[H]	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Nor (10)	DVD(EXT4)	L	L
						ON	NO.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							C+.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	DVD	DVD	REC	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							AV1	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	AV1(010)	CH2	AV1	DVD	DVD	DVD	REC	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
							AV2	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*3	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	DVD	DVD	REC	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
							AV3	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	MUTE	CH3	AV3	DVD	DVD	DVD	REC	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
					NO		DVD	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Nor (10)	DVD(EXT4)	L	L
					ANY		DVD	---	VCR OUT(1-)	VCR OUT(00)	H(1)	*2[H]	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	DVD	DVD	REC	DVD (100)	Nor (10)	DVD(EXT4)	L	L
		---	VV	DVD	---	OFF	NO.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	DVD	DVD	PB VHS	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							C+.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	DVD	DVD	PB VHS	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							AV1	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	AV1(010)	CH2	PB	DVD	DVD	DVD	PB VHS	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
							AV2	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	AV2(011)	CH2	PB	DVD	DVD	DVD	PB VHS	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
							AV3	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	MUTE	CH3	PB	DVD	DVD	DVD	PB VHS	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
							DVD	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	OFF(1)	L (DVD)	DVD(000)	CH2	PB	DVD	DVD	DVD	PB VHS	DVD (100)	Nor (10)	DVD(EXT4)	L	L
						ON	NO.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	DVD	DVD	PB VHS	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							C+.TU	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	DVD	DVD	PB VHS	TUN (000)	Nor (10)	DVD(EXT4)	L	L
							AV1	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	AV1(010)	CH2	PB	DVD	DVD	DVD	PB VHS	AV1in (001)	Nor (10)	DVD(EXT4)	L	L
							AV2	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	AV2(011)	CH2	PB	DVD	DVD	DVD	PB VHS	AV2in (010)	Nor (10)	DVD(EXT4)	L	L
							AV3	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	MUTE	CH3	PB	DVD	DVD	DVD	PB VHS	AV3in (011)	Nor (10)	DVD(EXT4)	L	L
							DVD	---	DVD OUT(00)	DVD OUT(11)	*5[M/H]	*5[M/H]	ON(0)	L (DVD)	DVD(000)	CH2	PB	DVD	DVD	DVD	PB VHS	DVD (100)	Nor (10)	DVD(EXT4)	L	L
P.ON	DECODER	TV	EE	VCR	L	---	NO.TU	L	VCR OUT(1-)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	AV1IN	TUN	REC	TUN (000)	Hifi,Mix,Nor	AV1in	L	L
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	TUN(001)	CH1/CH2	TUN	AV2IN	AV1IN	AV2IN	REC	TUN (000)	BSmon	AV1in	L	L
							C+.TU	L	VCR OUT(1-)	TUN IN(10)	L	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	TUN	L	L
								M/H	VCR OUT(1-)	TUN IN(10)	L	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	TUN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	TUN	L	L
							AV1	L	VCR OUT(1-)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	L	L
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	BSmon	AV1in	L	L
							AV2	L	VCR OUT(1-)	AV1 IN(01)	L	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	BSmon	AV1in	L	L
							AV3	L	VCR OUT(1-)	AV1 IN(01)	L	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV1IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	AV1in	L	L
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	MUTE	CH3	AV3	AV2IN	AV1IN	AV2IN	REC	AV3in (011)	BSmon	AV1in	L	L
							DVD	L	VCR OUT(1-)	AV1 IN(01)	L	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
								M/H	AV2 IN(01)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	DVD(000)	CH2	DVD	AV2IN	AV1IN	AV2IN	REC	DVD (100)	BSmon	AV1in	L	L
					H	---	NO.TU	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	AV1IN	TUN	REC	TUN (000)	Hifi,Mix,Nor	AV1in	L	L
							C+.TU	L	VCR OUT(1-)	TUN IN(10)	H	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	TUN	L	L
								M/H	VCR OUT(1-)	TUN IN(10)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	TUN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	TUN	L	L
							AV1	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	L	L
								M/H	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L

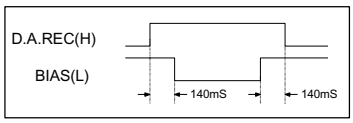
INPUT CONDITION								Video Output Result LA73021 setting									Audio Output Results			AN3655 settings				Mute signals	
POWER	AV2 SELECT	TV/ VTR	EE/ VV	DVD/VCR MODE	OSD ON(H)	DVD RGB	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	DVD/AV2 SELECT	Video to YC	YC INPUT	YC-out OUT	AV1 Out	AV2 Out	RF (C)	REC/ PB	Input Select	AV1 output Select	AV2 output Select	Mute (H)	A-Mute (H)
	Function menu	AV link				Function menu		AV2-8 in	V-OUTSEL	V-DECSEL	AV1-8	AV2-8 out	RGB OFF(H)	DVD(L)	V-INSEL	YC-INSEL	YC-out				A-REC/PB	A-INSEL	A-OUTSEL	A-DECSEL		not used
							AV2	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
							AV3	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV1IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	AV1in	L	L
							DVD	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
		VTR	EE	VCR	L	---	NO.TU	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	AV1IN	TUN	REC	TUN (000)	Hifi,Mix,Nor	AV1in	L	L
							C+.TU	L	VCR OUT(1-)	TUN IN(10)	H	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	TUN	L	L
								M/H	VCR OUT(1-)	TUN IN(10)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	TUN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	TUN	L	L
							AV1	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	L	L
								M/H	VCR OUT(1-)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
							AV2	L	VCR OUT(1-)	AV1 IN(01)	H	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
								M/H	VCR OUT(1-)	AV1 IN(01)	*7[M/H]	L	ON(0)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
							AV3	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV1IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	AV1in	L	L
								M/H	VCR OUT(1-)	AV1 IN(01)	*7[M/H]	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV1IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	AV1in	L	L
						OFF	DVD	---	VCR OUT(1-)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
					NO	ON		---	VCR OUT(1-)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
					ANY			---	VCR OUT(1-)	AV1 IN(01)	H(1)	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
					H	---	NO.TU	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	AV1IN	TUN	REC	TUN (000)	Hifi,Mix,Nor	AV1in	L	L
							C+.TU	L	VCR OUT(1-)	TUN IN(10)	H	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	TUN	TUN	TUN	TUN	REC	TUN (000)	Hifi,Mix,Nor	TUN	L	L
								M/H	VCR OUT(1-)	TUN IN(10)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	TUN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	TUN	L	L
							AV1	L	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV1(010)	CH2	AV1	AV1IN	AV1IN	AV1IN	REC	AV1in (001)	Hifi,Mix,Nor	AV1in	L	L
								M/H	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
							AV2	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	AV2(011)	CH2	AV2	AV2IN	AV1IN	AV2IN	REC	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
							AV3	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	H (AV2)	MUTE	CH3	AV3	AV3IN	AV1IN	AV3IN	REC	AV3in (011)	Hifi,Mix,Nor	AV1in	L	L
							DVD	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
			VV	VCR	---	---	NO.TU	---	VCR OUT(1-)	AV1 IN(01)	*6[M/H]	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	PB	PB	AV1IN	PB	PB VHS	TUN (000)	Hifi,Mix,Nor	AV1in	L	L
							C+.TU	---	VCR OUT(1-)	TUN IN(10)	*6[M/H]	L	OFF(1)	H (AV2)	TUN(001)	CH1/CH2	PB	PB	TUN	PB	PB VHS	TUN (000)	Hifi,Mix,Nor	TUN	L	L
							AV1	---	VCR OUT(1-)	AV1 IN(01)	*6[M/H]	L	OFF(1)	H (AV2)	AV1(010)	CH2	PB	PB	AV1IN	PB	PB VHS	AV1in (001)	Hifi,Mix,Nor	AV1in	L	L
							AV2	---	VCR OUT(1-)	AV1 IN(01)	*6[M/H]	L	OFF(1)	H (AV2)	AV2(011)	CH2	PB	PB	AV1IN	PB	PB VHS	AV2in (010)	Hifi,Mix,Nor	AV1in	L	L
							AV3	---	VCR OUT(1-)	AV1 IN(01)	*6[M/H]	L	OFF(1)	H (AV2)	MUTE	CH3	PB	PB	AV1IN	PB	PB VHS	AV3in (011)	Hifi,Mix,Nor	AV1in	L	L
							DVD	---	VCR OUT(1-)	AV1 IN(01)	*6[M/H]	L	OFF(1)	H (AV2)	DVD(000)	CH2	PB	PB	AV1IN	PB	PB VHS	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
		---	EE	DVD	---	OFF	NO.TU	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	AV1IN	DVD	REC	TUN (000)	Nor (10)	AV1in	L	L
							C+.TU	L	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	TUN	DVD	REC	TUN (000)	Nor (10)	TUN	L	L
								M/H	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	TUN	DVD	REC	AV2in (010)	Nor (10)	TUN	L	L
							AV1	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV1(010)	CH2	AV1	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
								M/H	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV2in (010)	Nor (10)	AV1in	L	L
							AV2	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV2in (010)	Nor (10)	AV1in	L	L
							AV3	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	MUTE	CH3	AV3	DVD	AV1IN	DVD	REC	AV3in (011)	Nor (10)	AV1in	L	L
					NO		DVD	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Nor (10)	AV1in	L	L
					ANY		DVD	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
						ON	NO.TU	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	AV1IN	DVD	REC	TUN (000)	Nor (10)	AV1in	L	L
							C+.TU	L	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	TUN	DVD	TUN	DVD	REC	TUN (000)	Nor (10)	TUN	L	L
								M/H	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	TUN	DVD	REC	AV2in (010)	Nor (10)	TUN	L	L
							AV1	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV1(010)	CH2	AV1	DVD	AV1IN	DVD	REC	AV1in (001)	Nor (10)	AV1in	L	L
								M/H	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV2in (010)	Nor (10)	AV1in	L	L
							AV2	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	AV2	DVD	AV1IN	DVD	REC	AV2in (010)	Nor (10)	AV1in	L	L
							AV3	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	MUTE	CH3	AV3	DVD	AV1IN	DVD	REC	AV3in (011)	Nor (10)	AV1in	L	L
					NO		DVD	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Nor (10)	AV1in	L	L
					ANY		DVD	---	VCR OUT(1-)	AV1 IN(01)	H	L	OFF(1)	L (DVD)	DVD(000)	CH2	DVD	DVD	AV1IN	DVD	REC	DVD (100)	Hifi,Mix,Nor	AV1in	L	L
		---	VV	DVD	---	OFF	NO.TU	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	AV1IN	DVD	PB VHS	TUN (000)	Nor (10)	AV1in	L	L
							C+.TU	L	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	OFF(1)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	TUN	DVD	PB VHS	TUN (000)	Nor (10)	TUN	L	L

INPUT CONDITION									Video Output Result LA73021 setting								Audio Output Results			AN3655 settings				Mute signals	
POWER	AV2 SELECT	TV/ VTR	EE/ VV	DVD/VCR MODE	OSD ON(H)	DVD RGB	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	DVD/AV2 SELECT	Video to YC	YC INPUT	YC-out OUT	AV1 Out	AV2 Out	RF (C)	REC/ PB	Input Select	AV1 output Select	AV2 output Select	Mute (H)	A-Mute (H)
	Function menu	AV link				Function menu			V-OUTSEL	V-DECSEL	AV1-8	AV2-8 out	RGB OFF(H)	DVD(L)	V-INSEL	YC-INSEL	YC-out				A-REC/PB	A-INSEL	A-OUTSEL	A-DECSEL		not used
								M/H	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	PB	DVD	TUN	DVD	PB VHS	AV2in (010)	Nor (10)	TUN	L	L
							AV1	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV1(010)	CH2	PB	DVD	AV1IN	DVD	PB VHS	AV1in (001)	Nor (10)	AV1in	L	L
								M/H	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	PB	DVD	AV1IN	DVD	PB VHS	AV2in (010)	Nor (10)	AV1in	L	L
							AV2	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	AV2(011)	CH2	PB	DVD	AV1IN	DVD	PB VHS	AV2in (010)	Nor (10)	AV1in	L	L
							AV3	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	MUTE	CH3	PB	DVD	AV1IN	DVD	PB VHS	AV3in (011)	Nor (10)	AV1in	L	L
							DVD	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	OFF(1)	L (DVD)	DVD(000)	CH2	PB	DVD	AV1IN	DVD	PB VHS	DVD (100)	Nor (10)	AV1in	L	L
						ON	NO.TU	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	AV1IN	DVD	PB VHS	TUN (000)	Nor (10)	AV1in	L	L
							C+.TU	L	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	ON(0)	L (DVD)	TUN(001)	CH1/CH2	PB	DVD	TUN	DVD	PB VHS	TUN (000)	Nor (10)	TUN	L	L
								M/H	DVD OUT(00)	TUN IN(10)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	PB	DVD	TUN	DVD	PB VHS	AV2in (010)	Nor (10)	TUN	L	L
							AV1	L	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV1(010)	CH2	PB	DVD	AV1IN	DVD	PB VHS	AV1in (001)	Nor (10)	AV1in	L	L
								M/H	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	PB	DVD	AV1IN	DVD	PB VHS	AV2in (010)	Nor (10)	AV1in	L	L
							AV2	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	AV2(011)	CH2	PB	DVD	AV1IN	DVD	PB VHS	AV2in (010)	Nor (10)	AV1in	L	L
							AV3	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	MUTE	CH3	PB	DVD	AV1IN	DVD	PB VHS	AV3in (011)	Nor (10)	AV1in	L	L
							DVD	---	DVD OUT(00)	AV1 IN(01)	*5[M/H]	L	ON(0)	L (DVD)	DVD(000)	CH2	PB	DVD	AV1IN	DVD	PB VHS	DVD (100)	Nor (10)	AV1in	L	L

Remark:

NO.TU	Tuner position, DECODER OFF (e.g. ARD)
C+TU	Tuner position, DECODER ON (e.g. PREMI)
RGW SW	OFF = HIGH
RGW SW	ON = LOW
EE	Non-Playback signal
VV	Playback signal
INSEL	Inputselect= Audio Output signal from AN3655 at Line Out
***1[L]**	**In case of Personal Planner standby(not External Link), AV1 PB must not output 'M' or 'H'**
***2[H*] / *6[M/H]**	**AV2 PB must not output 'M' or 'H' if AV2 PB IN is 'M' or 'H'.**
***3**	**In case of EXT LINK (1/2) mode or normal REC from AV2 AV2 PB(H) should be low, in case of ex. EXTLINK (1/2) or normal REC AV2follow the result of DVD.**
***4**	**In case of EXT LINK (1/2) mode AV2 PB(H) should be low, in case of ex. EXTLINK (1/2) follow the result of DVD.**
***5[M/H]**	**State of AV PB should be decided by 16:9 information from DVD.**
***6[M/H]**	**State of AV2PB output should be decided by distinction of PB CTL.**
***7[M/H]**	**State of AV1PB output should be decided by result of AV2PB input.**

86	N.C	--	(No Connection.)	Low	Low	Low	Low
87	N.C	--	(No Connection.)	Low	Low	Low	Low
88	N.C	--	(No Connection.)	Low	Low	Low	Low
89	FLD/T2 CLK	O	Serial clock output terminal for FIP driver and TEST_2(Factory use).	Not fix	Low	Low	Low
90	FLD/T2 DATA IN	I	Serial data input terminal for FIP driver and TEST_2(Factory use).	Not fix	In	In	In
91	FLD/T2 DATA OUT	O	Serial data output terminal for FIP driver and TEST_2(Factory use).	Not fix	Low	Low	Low
92	FLD_CS	O	Chip select terminal for FIP driver.	Not fix	Low	Low	Low
93	T.REEL.PULSE	I	Input terminal for Take-up Reel sensor pulse.	In	In	In	In
94	S.REEL.PULSE	I	Input terminal for Supply Reel sensor pulse.	In	In	In	In
95	DAVN	I	DAVN signal from Slicer	In	In	In	In
96	EEP_WR	O	Write enable for EEPROM H:READ only L:Write	High	High	Low	High
97	OSD IIC CLK	O	IIC clock for EEPROM,I/O and slicer	Not fix	Low	Low	Low
98	OSD IIC DATA	I/O	IIC data for EEPROM,I/O and slicer	Not fix	Low	Low	Low
99	MAIN IIC CLK	O	IIC clock for AV1CHIP,FM audio,Tuner,Decoder and RFC	Not fix	Low	Low	Low
100	MAIN IIC DATA	I/O	IIC data for AV1CHIP,FM audio,Tuner,Decoder and RFC	Not fix	Low	Low	Low
101	N.C	--	(No Connection.)	Low	Low	Low	Low
102	N.C	--	(No Connection.)	Low	Low	Low	Low
103	FG.AMP.OUT	O	Output from internal FG Amplifier	---	---	---	---
104	FG.AMP.IN	I	Input for internal FG Amplifier	---	---	---	---
105	GND(A)	I	GND	---	---	---	---
106	GND	I	GND	---	---	---	---
107	PFG	I	Cylinder PG/FG input terminal	---	---	---	---
108	OREF	O	Output from internal reference voltage (2.5V)	---	---	---	---
109	IREF	I	Input for internal reference voltage	---	---	---	---
110	to GND	I	Connect to GND	---	---	---	---
111	CTL.HEAD(-)	I	Input signal from CTL HEAD(+)	---	---	---	---
112	CTL.HEAD(+)	I	Input signal from CTL HEAD(-)	---	---	---	---
113	CTL.AMP.REF	I	Input for internal CTL amplifier reference voltage	---	---	---	---
114	PB.CTL.OUT	O	Output from internal CTL amplifier	---	---	---	---
115	+5V(A)	I	5V input terminal	---	---	---	---
116	+5V(AD)	I	5V input terminal	---	---	---	---

31	20MHz.IN	I	Main oscillator input	---	STOP	STOP	---
32	20MHz.OUT	O	Main oscillator output	---	STOP	STOP	---
33	+5V(D)	I	5V input terminal	---	---	---	---
34	32KHz IN	I	Sub oscillator input	---	---	---	---
35	32KHz OUT	O	Sub oscillator output	---	---	---	---
36	NC(VCONT)	I	Video Control	---	---	---	---
37	V EE(L)	O	Output terminal for switch between EE and VV.	Low	Low	Low	Low
38	D REC(H)	O	Output terminal for video recording current control.	Low	Low	Low	Low
39	D.A.REC(H)	O	Control terminal for normal audio recording current.	Low	Low	Low	Low
40	BIAS(L)	O	Bias oscillation Control terminal for Linear audio recording current. 	High	Hi-Z	Hi-Z	High
41	FM.MUTE(H)	O	Output terminal for audio mute control.	High	High	Low	High
42	N.C	--	(No Connection.)	---	---	---	---
43	POWER_KEY	I	Input terminal for the unit power button. It switches ON to OFF and/or OFF to ON when down edge is detected.	In	In	In	In
44	POS.SW3	I	Input terminal for mecha position.	In	In	In	In
45	POS.SW2	I	Input terminal for mecha position.	In	In	In	In
46	POS.SW1	I	Input terminal for mecha position.	In	In	In	In
47	POWER OFF(H)	O	ON/OFF Control terminal for power circuit. Power off condition: "High" is existed. ("Low" is existed when the mechanism and/or circuit operation is activated.)	High	High	Low	High
48	FIP(L)	O	Output terminal for FIP on/off control signal. ("Low" is existed when the power off condition under the "FIP OFF" setting.)	Not fix	High	Low	Low
49	P50 IN	I	Input terminal for Project 50 serial signal.	In	In	In	In
50	N.C	--	(No Connection.)	---	---	---	---
51	N.C	--	(No Connection.)	---	---	---	---
52	RESET(L)	I	Input terminal for microprocessor reset.	In	In	In	In
53	4FC.LPF	I	4fc clock input terminal	---	---	---	---
54	OSD.FSC IN	I	OSD clock input terminal	---	---	---	---
55	5V(OSD)	I	5V input terminal	---	---	---	---
56	CVIN	I	Input terminal for Composite video signal.	---	---	---	---
57	GND(OSD)	I	GND	---	---	---	---
58	LECHA	I	Input terminal for Composite video signal.(White level)	---	---	---	---
59	20M.START(H)	I	Switching terminal for stertting Mode.(High speed/Low speed)	---	---	---	---
60	MD0	I	Mode setting terminal for flash over-write.	---	---	---	---
61	CVOUT	O	Output terminal for CG Video.	---	---	---	---
62	HLF	O	LPF connecting terminal for the slicer. (For OSD dot clock.)	---	---	---	---
63	SECAM.V.IN	I	Chrominance input terminal for SECAM super impose.	---	---	---	---
64	GND	I	Connect to GND	In	In	In	In
65	S TAB(L)	I	Input terminal for the prevention tab. [EXIST] :LOW [NO EXIST] :HIGH	In	In	In	In
66	UNLOADING(H)	O	Control terminal for loading motor. [Reverse rotation / brake] : "High"	Low	Low	Low	Low
67	LOADING(H)	O	Control terminal for loading motor. [forward rotation / brake] : "High"	Low	Low	Low	Low
68	C.SYNC	I	Input terminal for composite V-sync signal.	In	In	In	In
69	EX.FF/REW(L)	O	Filter control terminal for PB-CTL signal in FF/REW.	Low	Low	Low	Low
70	PAL-I/BG/DK(SYS4)	O	Output terminal for TV broadcast system switching signal for video circuit control.	Not fix	Low	Low	Low
71	SECAM/PAL(SYS2)	O	Output terminal for TV broadcast system switching signal for video circuit control.	Not fix	Low	Low	Low
72	SLEEP(L)	O	Output terminal for super power save mode setting. P-OFF in the super power save mode "Low".	High	Low	Low	High
73	PB60Hz(H)	O	Switching terminal for NTSC FM Audio trap filter in PB. [VV (PB,Trick_PB/A-DUB, A-DUB-PS) mode and CTL is 60Hz] : "High" [Other than above condition] : "Low"	Low	Low	Low	Low
74	N.C	--	(No Connection.)	---	---	---	---
75	N.C	--	(No Connection.)	---	---	---	---
76	P FAIL(L)	I	Input terminal for Interrupt signal for power fail detection.	In	In	In	In
77	IR	I	Input terminal for Interrupt signal from IR sensor emitted by Remo-Con.	In	In	In	In
78	P50 OUT	O	Output terminal for Project 50 serial data.	Not fix	Low	Low	Low
79	CAP.ET	O	Output terminal for Capstan Torque command.	0V	0V	Low	0V
80	CYL.ET	O	Output terminal for Cylinder Torque command.	4.213V	4.213V	Low	4.213V
81	N.C	--	(No Connection.)	---	---	---	---
82	HALF_WAVE(H)	O	Switching terminal for capstan driver speed mode.(FAST/SLOW)	In	In	In	In
83	CAP.R/F	O	Switching terminal for capstan motor rotating direction.	Low	Low	Low	Low
84	125Hz	O	125Hz pulse output terminal for clock adjustment.	Not fix	Low	Low	Low
85	SHORT_DN	I	Short Circuit detection terminal for oscillation circuit in REC. *When the "BIAS(H)" is "Low" and this terminal is "High", "F08" is displayed. *When the "BIAS(H)" is "High" and this terminal is "low", "F07" is displayed.	In	In	In	In

No.	Port Name	I/O	Description	P-OFF	P-Save	P-FAIL	Reset
1	CURRENT_LIMIT	O	Capstan motor current limit terminal.	Low	Low	Low	Low
2	F ADJUST	O	Analogue voltage output for HEAD frequency response adjustment	Low	Low	Low	Low
3	N.C	--	(No Connection.)	---	---	---	---
4	C EMPHA(H)	O	Terminal of the Current emphasis video/FM audio recording current. [HIFI/2HEAD]:Fix to Low (Normal mode) [4HEAD] :Fix to Low (factory mode) Fix to High (Insert/AV Insert mode) Others (Depend on tape speed)	Low	Low	Low	Low
5	TRACKING_ENVE	O	Playback envelope input for auto tracking adjustment and cvc.	In	In	In	In
6	SLP(H)	O	Tape running speed output terminal.(Output signal depens on tape speed) [High]……During NTSC_10H or PAL_9H mode [Low]……Except NTSC_10H or PAL_9H mode	Low	Low	Low	Low
7	LP(H)	O	Tape running speed output terminal.(Output signal depens on tape speed) [High]……During NTSC_4H/6H or PAL_6H/9H mode [Low]……Except NTSC_4H/6H or PAL_6H/9H mode 2HEAD model: Low Fix	Low	Low	Low	Low
8	CPB	I	Input terminal for "PB (H)" from AV2. [High]……3.85V - 5.0V [Midd]……1.82V - 2.84V [Low]…… 0V - 0.81V	In	In	In	In
9	AFC S	I	"S-curve" Input terminal from tuner.	In	In	In	In
10	A-MUTE(H)	O	Audio mute output terminal for RF Converter.	High	High	Low	High
11	AV1_8IN	I	Input terminal for "PB (H)" from AV1. [High]……3.85V - 5.0V [Midd]……1.82V - 2.84V [Low]…… 0V - 0.81V	In	In	In	In
12	N/S/T2/T3	I	Mode select terminal [NORMAL mode]: More than 4.0V [SERVICE mode]: 2.5V - 4.0V [TEST_2 mode]: 1.0V - 2.5V [TEST_3 mode]: 0V - 1.0V	In	In	In	In
13	S-PHOTO	I	Tape end sensor input terminal.(Photo sensor input from supply side) [Black Tape]: more than 2.6V [Lead Tape]: Less than 2.4V	In	In	In	In
14	T-PHOTO	I	Tape beginning sensor input terminal.(Photo sensor input from take-up side) [Black Tape]: more than 2.6V [Lead Tape]: Less than 2.4V	In	In	In	In
15	ABS_NORM(H)	I	(Input terminal for FM audio enverope output level detection)	In	In	In	In
16	N.C	--	(No Connection.)	Low	Low	Low	Low
17	N.C	--	(No Connection.)	---	---	---	---
18	N.C	--	(No Connection.)	---	---	---	---
19	D.FM.REC(H)	O	Timing output terminal for FM_Audio recording current.	Low	Low	Low	Low
20	ART.V/H/N	O	Output terminal for Artificial V synchronization signal.	Low	Low	Low	Low
21	ROTARY.SW	O	Output terminal for rotary switch.	Low	Low	Low	Low
22	H.A.SW	O	Output terminal for HEAD AMP switch.	Low	Low	Low	Low
23	ENVE.SELECT	I	Input terminal for enverope selection.	Low	Low	Low	Low
24	VIDEO.H.SW	O	Output terminal for video HEAD switch.	Low	Low	Low	Low
25	A.H.SW	O	Output terminal for FM audio HEAD switch.	Low	Low	Low	Low
26	A.DEF(H)	O	Audio Mute output terminal for tuner and decoder. [High].....During VCR mode is NORMAL PLAY and VV mode.	Low	Low	Low	Low
27	PROG.ON(H)	O	I/O control to switch IIC bus for LW-programmer. H:IIC bus is connected to AV2. L:IIC bus is not connected to AV2.	Low	Low	Low	Low
28	AVPB-H(L)	O	"PB-(H)"output terminal for AV2 *Details, refer to 21pin control specifications. *The signal output from Pin-8 of 21pin terminal is shown below. pin8 \ Name: AVPB-H(L) / AVPBM-(H) High: L / Hi-Z Middle: H / Hi-Z Low: H / L	High	High	Low	High
29	AVPB-M(H)	I		Low	Low	Low	Low
30	GND(D)	--	GND	---	---	---	---

VCR Operations

VCR display

Playback (indicated by = ▷)

Stop (indicated by = □)
- To stop winding a tape, recording or playback.

Still Playback (indicated by = II/I▸)
- Press this button during playback.
- Resume normal playback by pressing this button again or the Playback button ▷.

Slow Playback
- Keep this button pressed down for more than 2 seconds during playback.
- Resume normal playback by pressing the Playback button ▷.

Fast Forward and Forward Search
Fast Rewind and Backward Search
- To select Fast Forward or Fast Rewind, press these buttons when the video has stopped.
- To briefly watch the picture during Fast Forward or Fast Rewind, hold down the corresponding button.
- To search press these buttons briefly during playback, and the search will continue until the Playback button ▷ is pressed. Two times pressing increases search speed (JET SEARCH).
- If you keep this button pressed, the search function will continue until you release the button.

INDEX/SKIP

VHS Index Search Function

EJECT / TAPE

Remove the cassette.
Press the EJECT button on the VCR or press the button □ for more than 3 seconds on the remote control.

AUDIO

Change the Sound mode.
Press this button repeatedly.

Stereo sound:	OSD Display L R
Left channel:	OSD Display L
Right channel:	OSD Display R
Mono sound:	OSD Display - -

DISPLAY

Display time, Tape counter or Remaining tape time.
Press this button repeatedly.

TRACKING/V-LOCK / CH

Select the VCR channel
and adjust the tracking.

CANCEL/RESET / A

Reset the Tape counter.
Press this button. When inserting a cassette, the counter is reset to 0:00.00 .

1 2 3 4 5 6 7 8 9 0 -/--

Select the channel or the VIDEO Plus+ number
Use the numeric buttons.
Sample: 18 = -/-- 1 8

MENU

Display the Main menu

VIDEO Plus+

VCR Timer Recording Function

DIRECT TV REC / REC

VCR Recording Functions

PROG/CHECK / TIMER

VCR Timer Recording Functions

I-TIMER B / SL/LP/EP C

VCR Timer Recording and Tape Speed Functions

SEARCH

VCR Programme List and Intro Jet Scan Function

DVD Operations

DVD display

Playback (indicated by = ▷)

POSITION MEMORY

Restart from the memorized position

Playback Stop (indicated by = □)

Playback Pause (indicated by = II/I▸)

SLOW/SEARCH

Slow-motion play
- Keep this button pressed down while paused.
- Slow Playback forward
- Slow Playback backward
- Resume normal playback by pressing the Playback button ▷.

Forward Search

Backward Search

A / B / C / D

ADVANCED SURROUND: Playback if you are using 2 front speakers
BASS PLUS: If you connected a subwoofer
PICTURE: Enhances detail in dark scenes
DIALOGUE ENHANCER: Increase the volume of the dialogue sound

ONE TOUCH MEMORY / TV ASPECT

Reselect or store this settings

INDEX/SKIP

Skipping chapters or tracks

OPEN/CLOSE / DISC

Remove the disc.
Press the OPEN/CLOSE button on the DVD or press the button □ for more than 3 seconds on the remote control.

AUDIO

To change audio soundtrack / language.
Press AUDIO during play . The soundtrack changes each time you press the button.

DISPLAY

Call up OSD-screens

TOP MENU

Call up the top menu of a DVD

MENU

Call up the menu of a DVD

RETURN

Return from DVD SETUP menu to playback

SUBTITLE

Language of subtitles

PLAY MODE

Call up the PLAYLIST menu

SET UP

Call up the DVD SETUP menu

REC CHECK

Check the VCR recording status. For a moment the Timer recording menu or an Info box appears on the OSD.

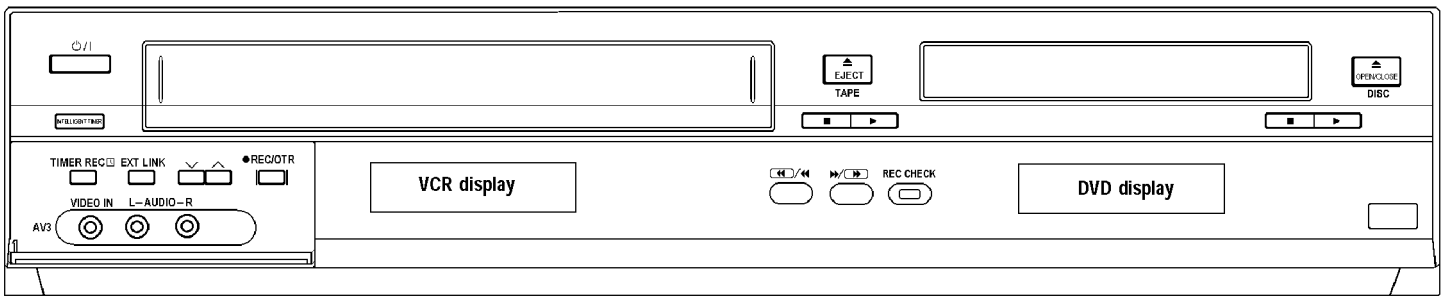
REPEAT

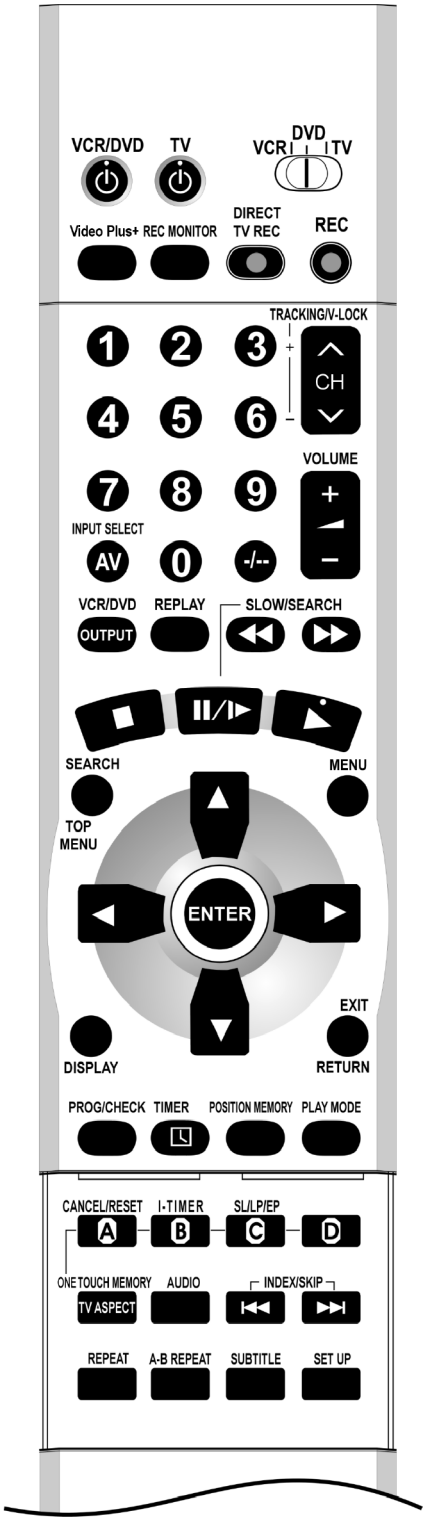
Repeat play

A-B REPEAT

A-B Repeat Playback

Notes: To preserve the video heads, the following functions are switched off automatically after 5 - 10 minutes (Distorted pictures and tape transport noises during these functions are not functional faults): Forward Search (Cue), Backward Search (Review), Jet Search, Still Playback, Slow Playback.





The functions of these buttons can be operated by the Remote Control or directly on the unit. In this description, the remote control symbols are used in most cases.

TV Operations

To set the Remote Control code to operate the TV.

TV	**Switch the TV on and off.**
INPUT SELECT AV	**Select TV or AV channel.**
TV ASPECT	**Switch the screen format between the wide screen and other formats.**
CH	**Select the TV channel.**
VOLUME + −	**Operate the TV volume.**

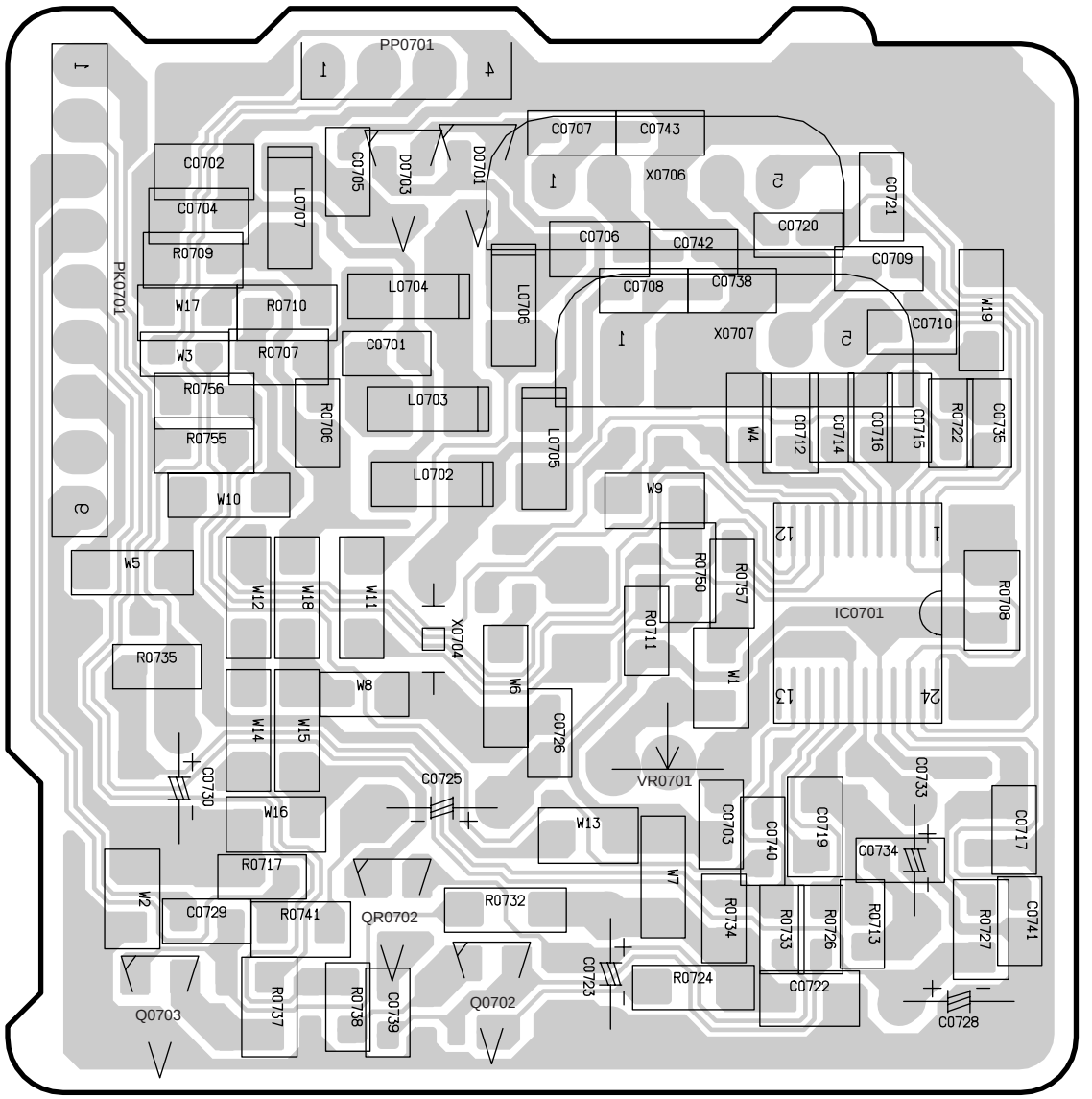
General Operations

VCR/DVD	**Standby/on switch** Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
ENTER	**Menu Operation** (indicated by = ▲▼◄►) These buttons are also used as cursors in order to select items on the menu. next line = ▲▼, next page = ◄►
ENTER	**Select or Store Operation**
EXIT	**EXIT a menu**
1 2 3 4 5 6 7 8 9 0 +10	**Direct input** (indicated by =❶ ❷ ❸ ... ⑩) by pressing numeric buttons
CANCEL/RESET A	**Clear settings**
REPLAY	**Operate REPLAY Function.** Press this button while playback.
DVD VCR TV	**Switch the Remote Control to VCR, DVD or TV**
INPUT SELECT AV	**To select the input** press this button repeatedly: VCR channel, A1, A2, A3 (front input) or dc (DVD)
VCR/DVD OUTPUT	**Switch the common output from VCR to DVD** or vice versa.

TV DEMODULATOR PACK C.B.A.	
Transistor	
Q0702	A-2
Q0703	A-1
Transistor & Resistor	
QR0702	A-2
Integrated Circuit	
IC0701	B-4
Adjustment	
VR0701	B-3
Connector	
PK0701	D-1
PP0701	D-2

ADDRESS INFORMATION

(VEP07A47A)

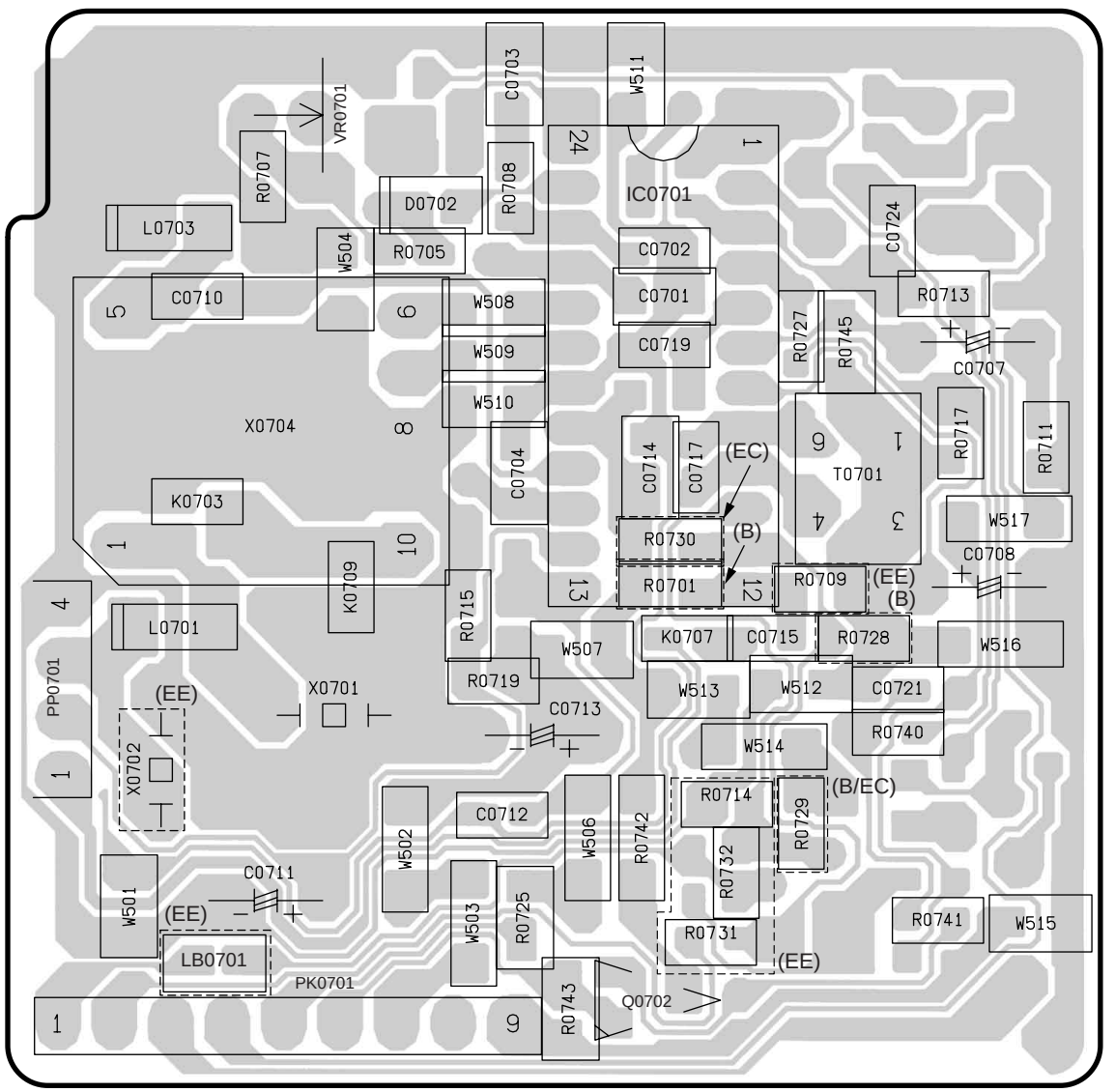


NV-VHD1F
TV DEMODULATOR PACK C.B.A.

TV DEMODULATOR PACK C.B.A.	
Transistor	
Q0702	A-3
Integrated Circuit	
IC0701	C-2
Adjustment	
T0701	B-3
VR0701	D-2
Connector	
PK0701	A-2
PP0701	B-1

ADDRESS INFORMATION

(VEP07A23S:NV-VHD1EC)
(VEP07A23T:NV-VHD1B)
(VEP07A23U:NV-VHD1EE)

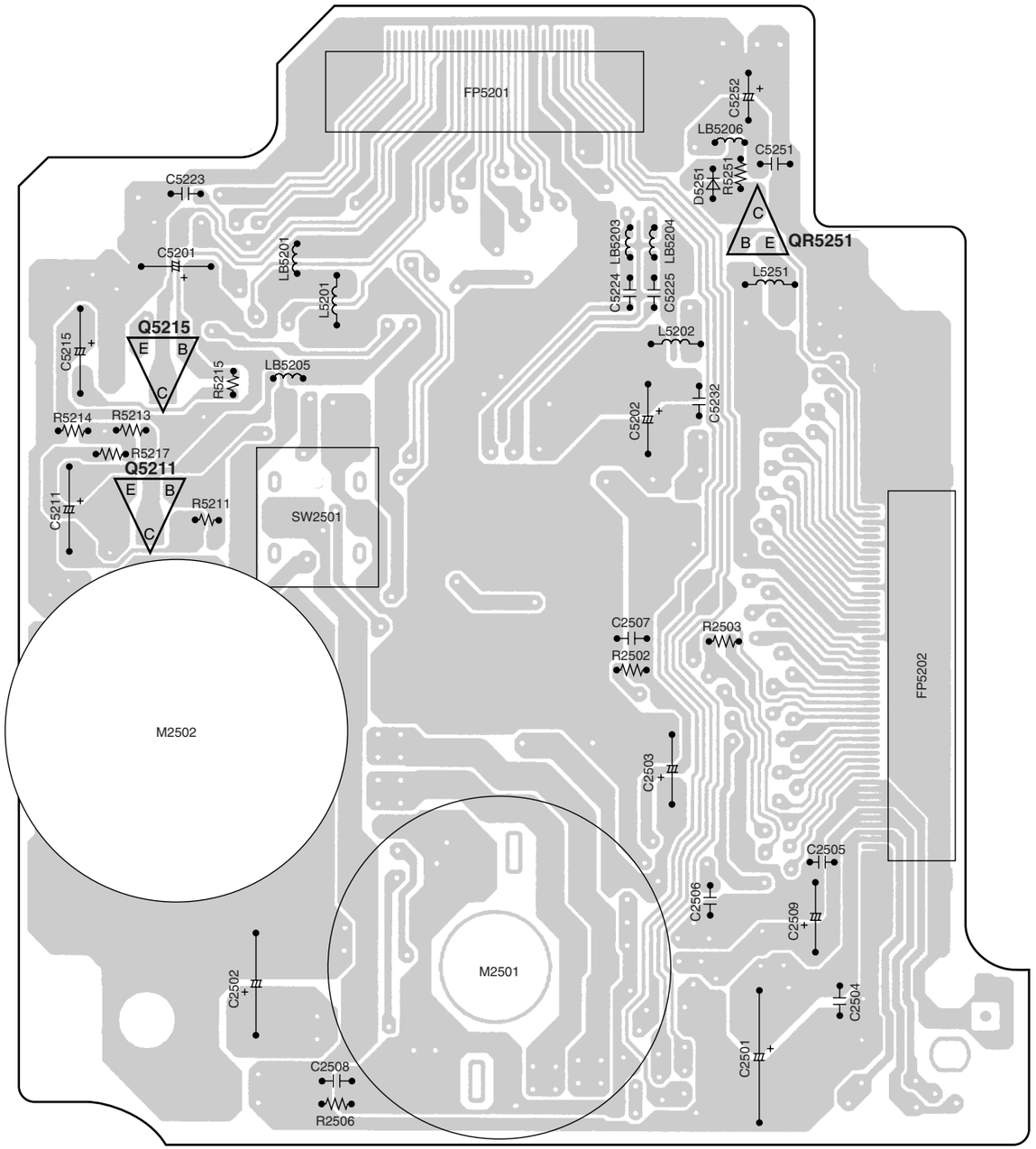


NV-VHD1B/EC/EE
TV DEMODURATOR PACK C.B.A.

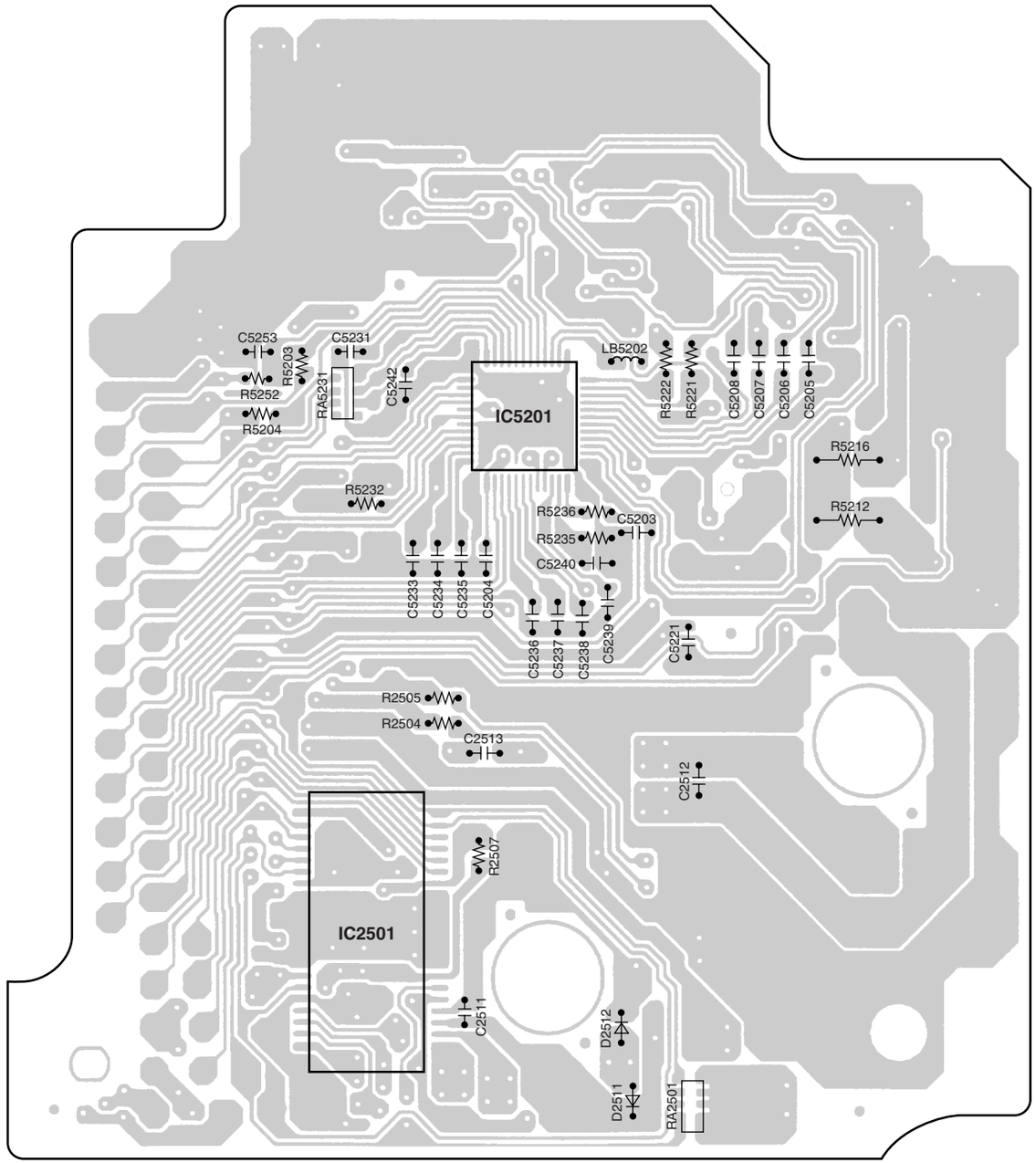
TERMINAL C.B.A.		
Transistor		
Q5211	C-1	Ⓒ
Q5215	D-1	Ⓒ
Transistor & Resistor		
QR5251	D-4	Ⓒ
Integrated Circuit		
IC2501	B-6	Ⓕ
IC5201	D-7	Ⓕ
Connector		
FP5201	E-3	Ⓒ
FP5202	C-4	Ⓒ

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

(REP3091A-1N)



(COMPONENT SIDE)



(FOIL SIDE)

NV-VHD1B/EC/EE/F
TERMINAL C.B.A.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

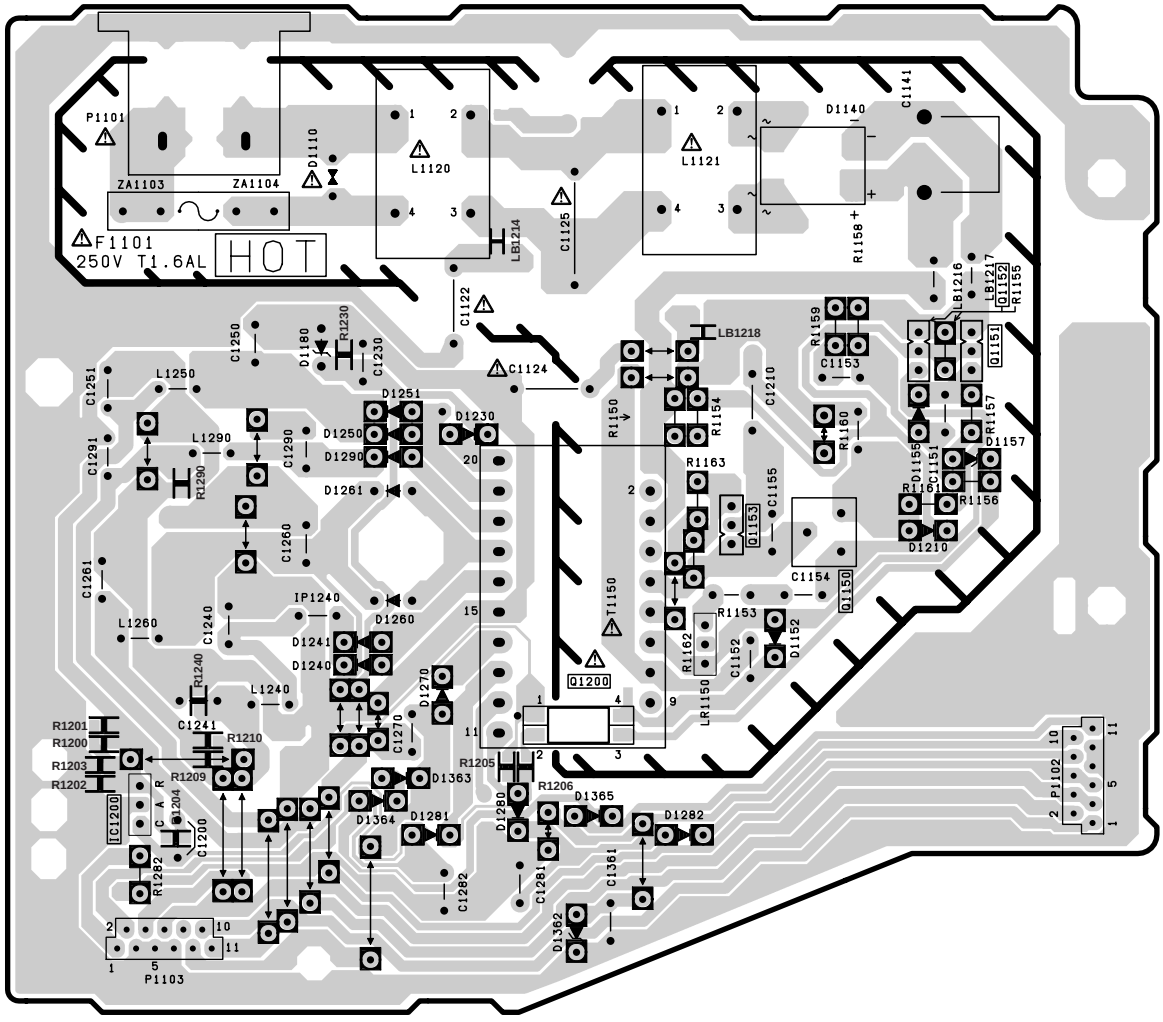
CAUTION

THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

POWER C.B.A.	
Transistor	
Q1200	B-3
Q1150	B-4
Q1151	C-4
Q1152	C-4
Q1153	B-3
Integrated Circuit	
IC1200	A-1
Connector	
P1101	D-1
P1102	B-4
P1103	A-1

ADDRESS INFORMATION

(VEP019911A)



NV-VHD1B/EC/EE/F
POWER C.B.A.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

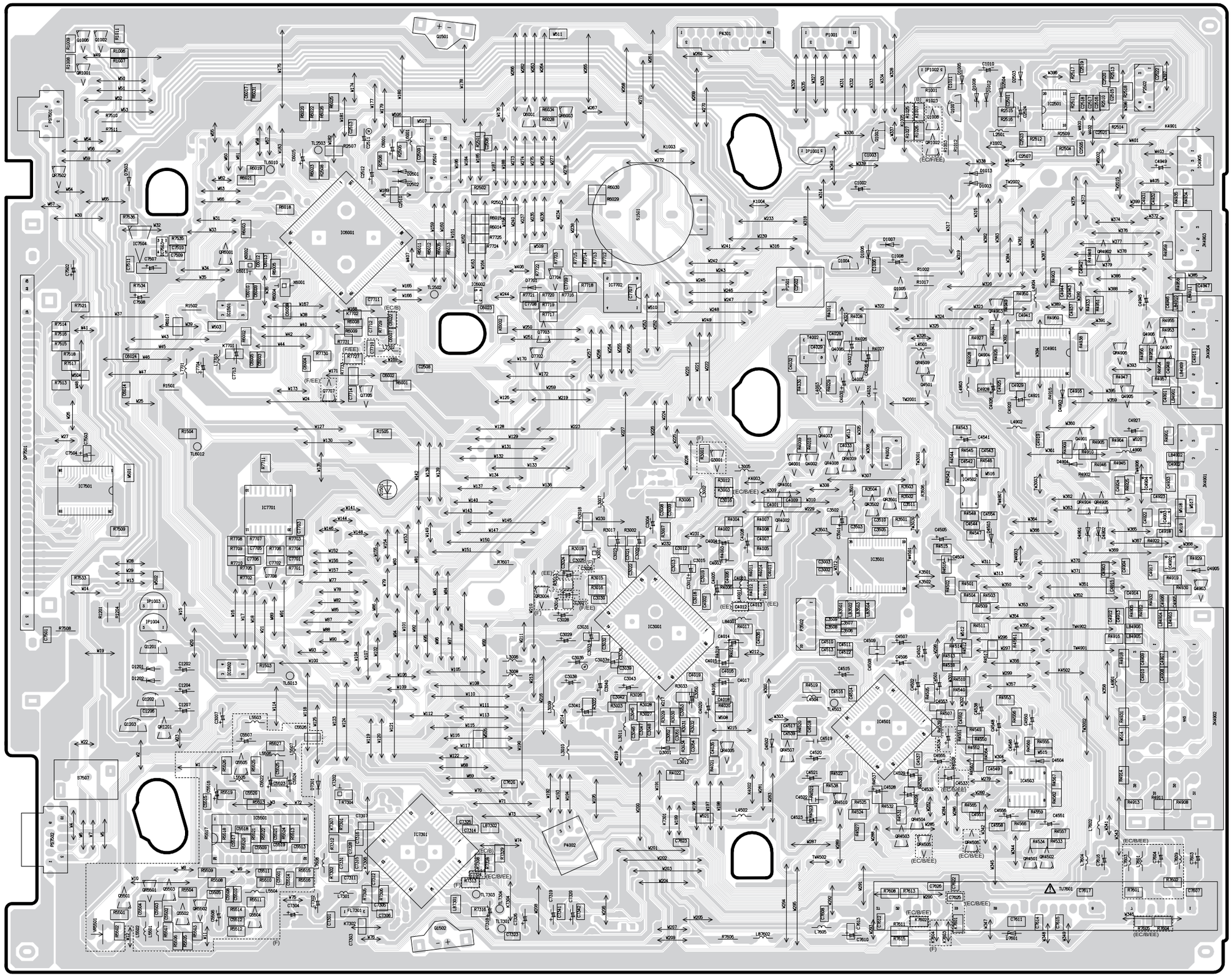
MAIN C.B.A.

Transistor	
Q1002	F-1
Q1003	F-6
Q1004	E-6
Q1005	E-6
Q1006	F-1
Q1007	F-6
Q1008	F-6
Q1201	B-2
Q1202	B-2
Q1203	B-1
Q1501	F-3
Q1502	A-3
Q3001	D-5
Q4001	D-5
Q4002	D-5
Q4005	D-6
Q4006	D-6
Q4501	D-6
Q4901	D-7
Q4903	D-8
Q4904	D-6
Q4905	D-7
Q4906	D-7
Q4907	D-8
Q5501	A-1
Q5502	A-2
Q5503	A-2
Q5504	A-2
Q5505	B-2
Q6001	F-4
Q7702	D-4
Q7703	D-4
Q7704	E-4
Q7705	D-3
Q7707	D-3
Q7708	C-2
Transistor & Resistor	
QR1001	F-1
QR1002	E-6
QR1201	B-2
QR3004	C-4
QR3501	C-6
QR3502	C-6
QR4001	C-5
QR4002	C-5
QR4003	D-5
QR4005	B-5
QR4008	D-6
QR4009	D-6
QR4501	A-7
QR4502	A-7
QR4503	A-6
QR4504	B-6
QR4505	A-6
QR4506	A-6
QR4507	B-5
QR4509	D-6
QR4510	B-6
QR4902	E-7
QR4903	E-7
QR4904	C-7
QR4905	C-7
QR4906	D-7
QR5501	A-2
QR5502	A-2
QR6001	E-2
QR6003	F-4
QR7502	E-1

Integrated Circuit	
IC1501	E-2
IC1502	B-2
IC2501	F-7
IC3001	C-4
IC3501	C-6
IC4501	B-6
IC4502	C-6
IC4503	B-7
IC4901	D-8
IC4902	C-8
IC4903	C-8
IC4904	C-7
IC4905	E-8
IC5501	B-2
IC6001	E-3
IC6002	E-3
IC7301	A-3
IC7501	D-1
IC7503	E-2
IC7504	E-1
IC7701	C-2
IC7702	E-4
Test Point	
TL2502	E-3
TL2503	E-2
TL4503	B-6
TL6010	E-2
TL6012	D-2
TL6013	B-2
TL7301	A-4
TL7303	A-3
TL7304	A-4
TW2001	D-6
TW2002	E-7
TW2015	E-7
TW3001	D-6
TW3002	B-7
TW3003	C-7
TW3030	C-6
TW4501	C-6
TW4502	A-5
TW4901	C-7
TW4902	C-7
TW4903	C-7
TW4906	D-7
TW4907	C-7
TW6002	E-7
Adjustment	
VR5501	A-1
Connector	
P1001	F-5
P1501	E-5
P2501	E-3
P2502	F-7
P3502	C-5
P4002	A-4
P4003	D-6
P4301	F-5
PS7501	F-1
PS7502	A-1
DP7501	D-1

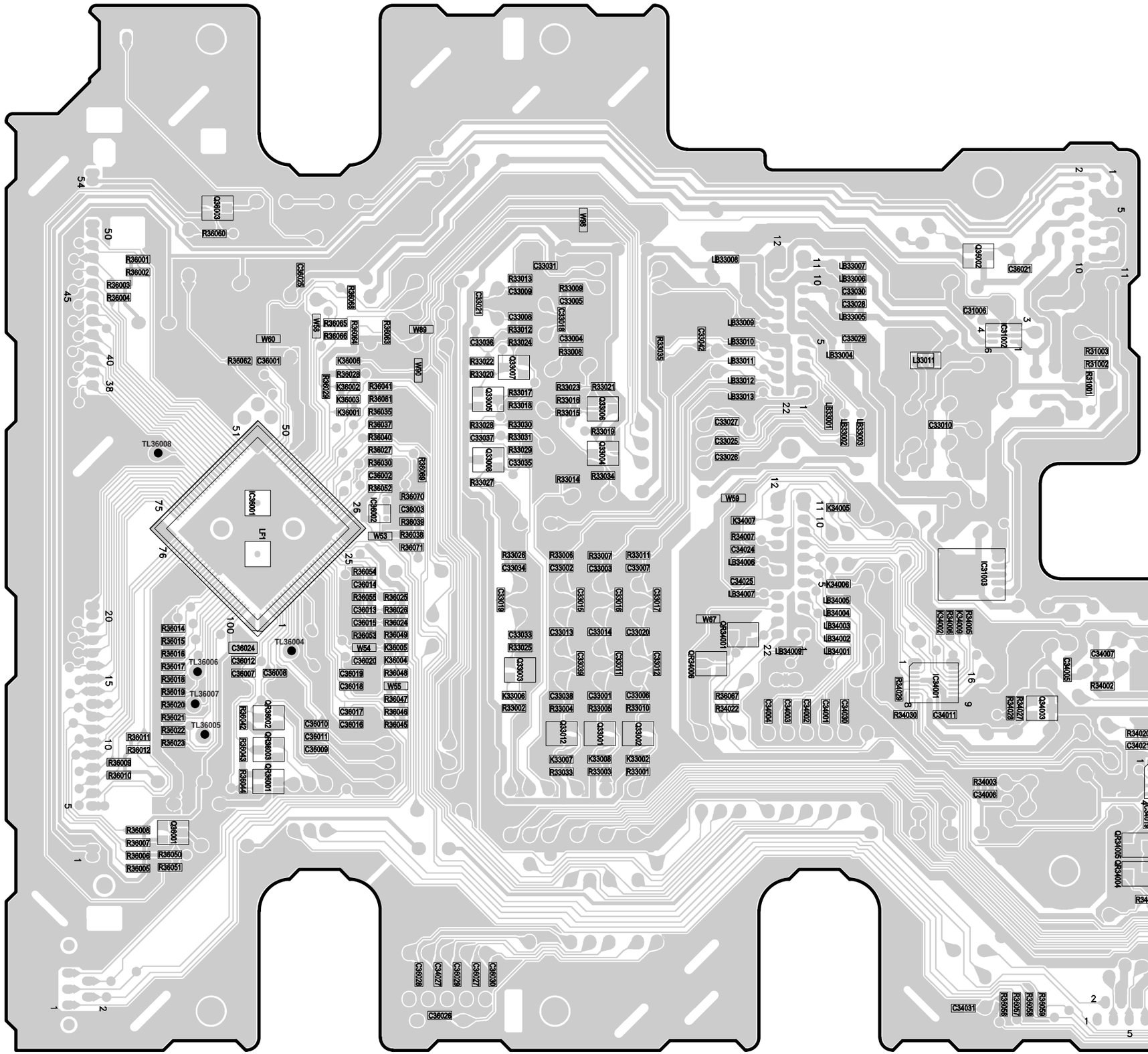
ADDRESS INFORMATION

(VEP06E75B:NV-VHD1B)(VEP06E75A:NV-VHD1EC)(VEP06E75D:NV-VHD1EE)(VEP06E75C:NV-VHD1F)



NV-VHD1B/EC/EE/F MAIN C.B.A.

(VEP06E76A)



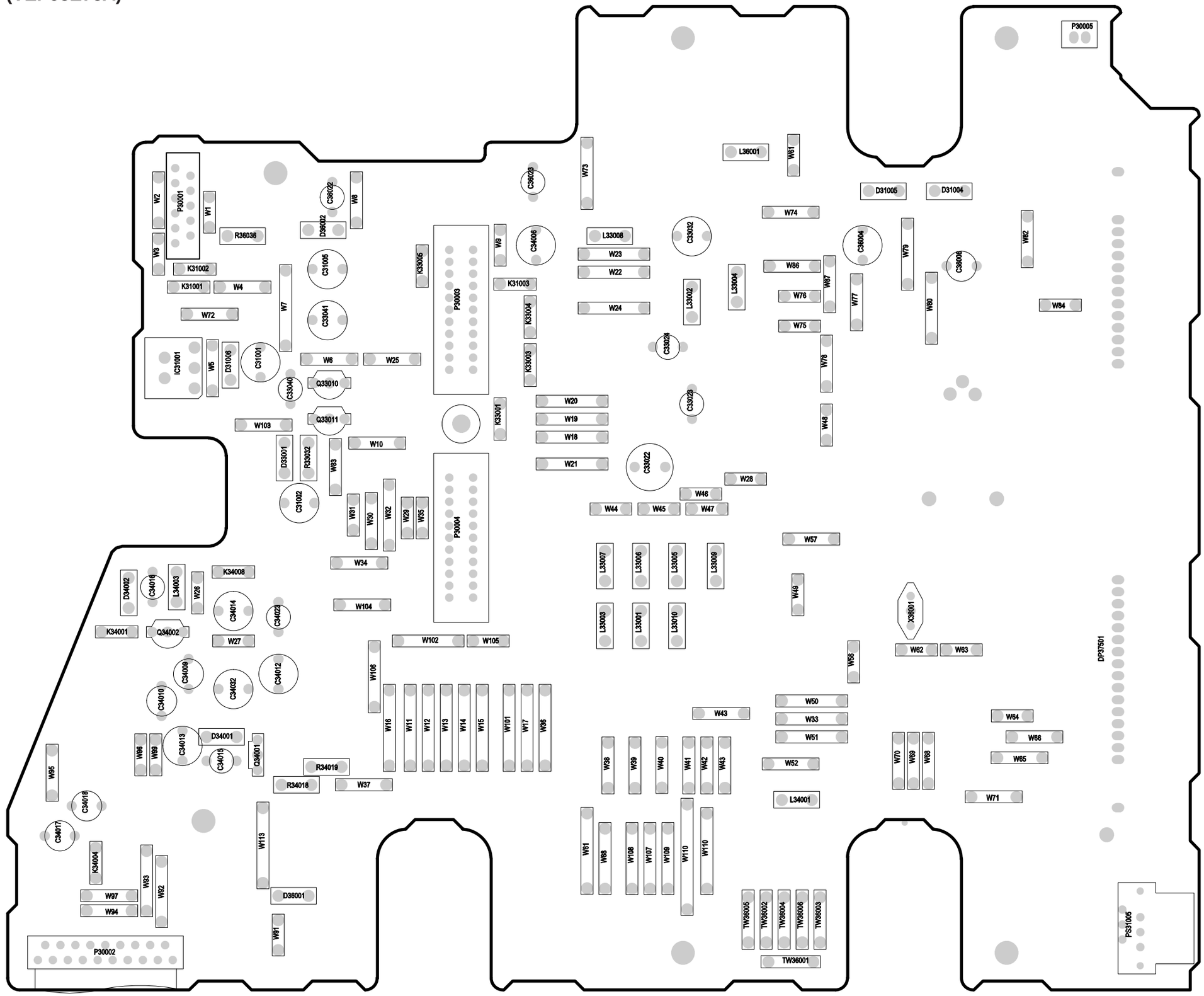
DVD INTERFACE C.B.A.	
Transistor	
Q33001	B-4
Q33002	B-4
Q33003	C-4
Q33004	D-4
Q33005	D-4
Q33006	D-4
Q33007	D-4
Q33008	D-4
Q33012	B-4
Q34003	C-7
Q34004	A-8
Q34005	A-7
Q36001	B-2
Q36002	E-6
Q36003	E-2
Transistor & Resistor	
QR34001	C-5
QR34004	B-7
QR34005	B-7
QR34006	C-5
QR36001	B-2
QR36002	B-2
QR36003	B-2
Integrated Circuit	
IC31002	E-6
IC31003	C-6
IC34001	C-6
IC34002	B-7
IC36001	D-2
IC36002	D-3
Connector	
TL36004	C-2
TL36005	B-2
TL36006	C-2
TL36007	C-2
TL36008	D-2

ADDRESS INFORMATION

(FOIL SIDE)

NV-VHD1B/EC/EE/F DVD INTERFACE C.B.A.

(VEP06E76A)



(COMPONENT SIDE)

DVD INTERFACE C.B.A.	
Transistor	
Q33010	D-3
Q33011	D-3
Q34001	B-2
Q34002	C-2
Integrated Circuit	
IC31001	D-2
Connector	
P30001	E-2
P30002	A-1
P30003	E-4
P30004	C-4
P30005	F-7
PS31005	A-7
Test Point	
TW36001	A-5
TW36002	A-5
TW36003	A-6
TW36004	A-5
TW36005	A-5
TW36006	A-5

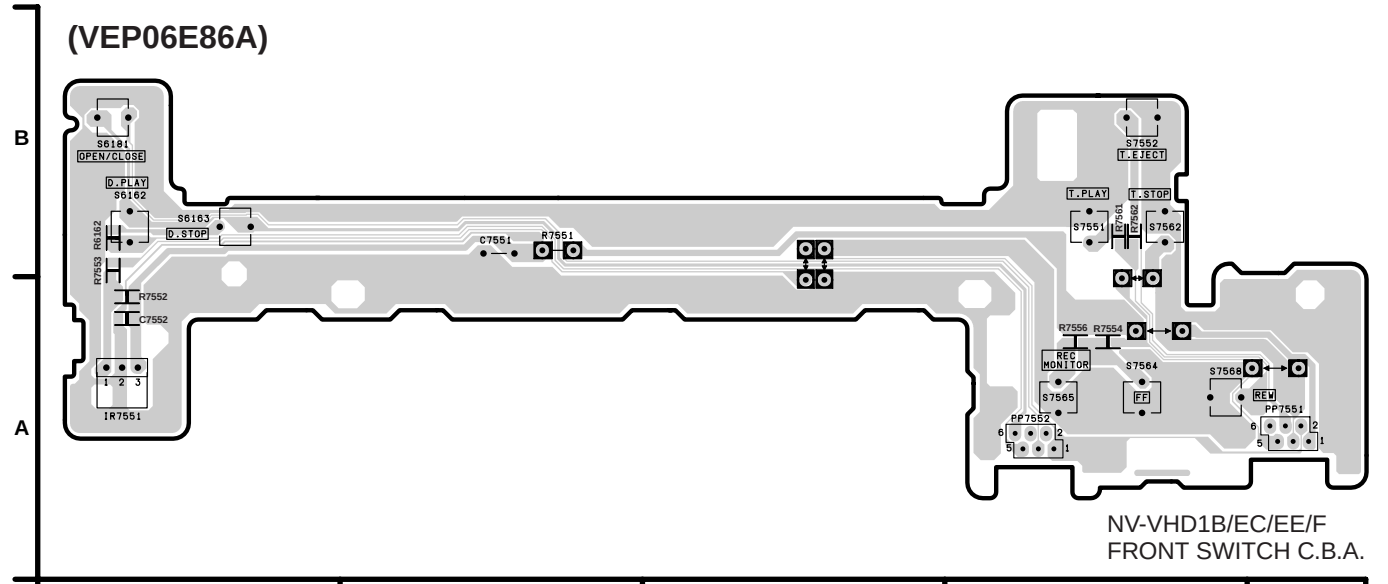
ADDRESS INFORMATION

NV-VHD1B/EC/EE/F DVD INTERFACE C.B.A.

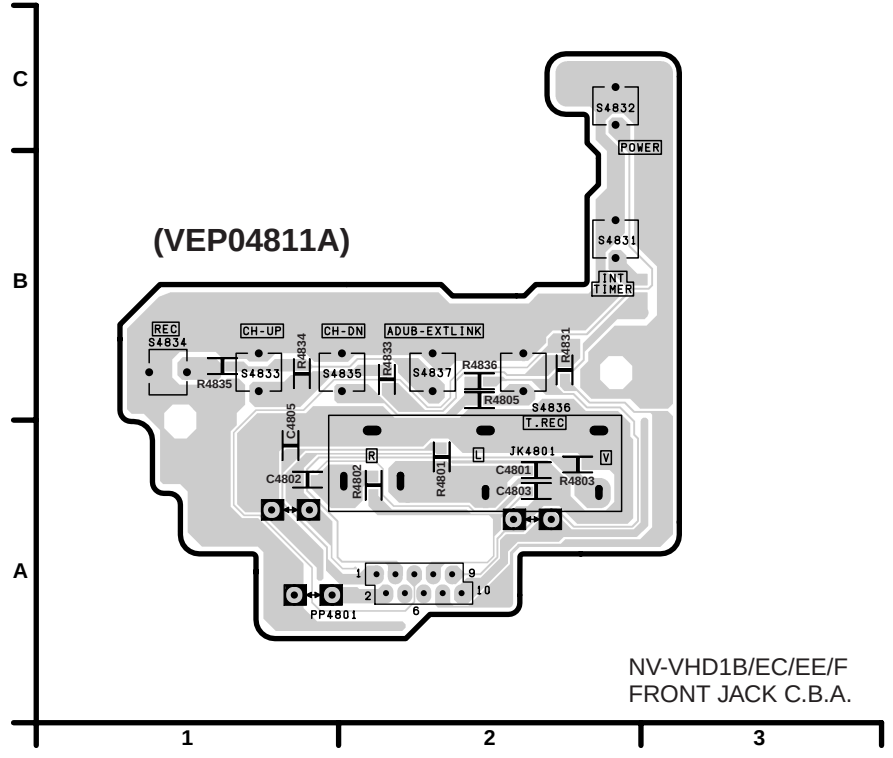
FRONT SWITCH C.B.A.	
Connector	
PP7551	A-1
PP7552	A-2

ADDRESS INFORMATION

(VEP06E86A)



NV-VHD1B/EC/EE/F
FRONT SWITCH C.B.A.

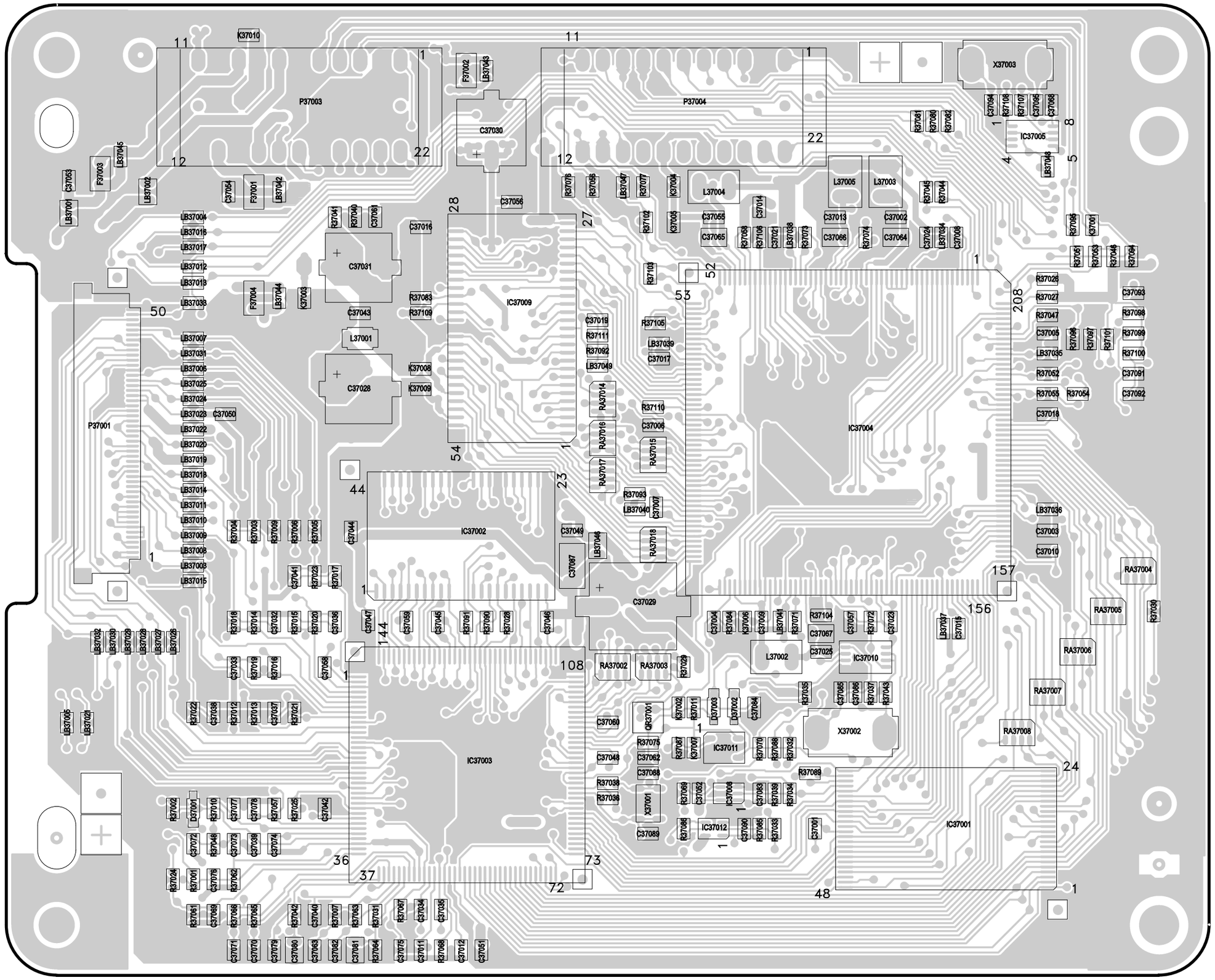


NV-VHD1B/EC/EE/F
FRONT JACK C.B.A.

FRONT JACK C.B.A.	
Connector	
PP4801	A-1

ADDRESS INFORMATION

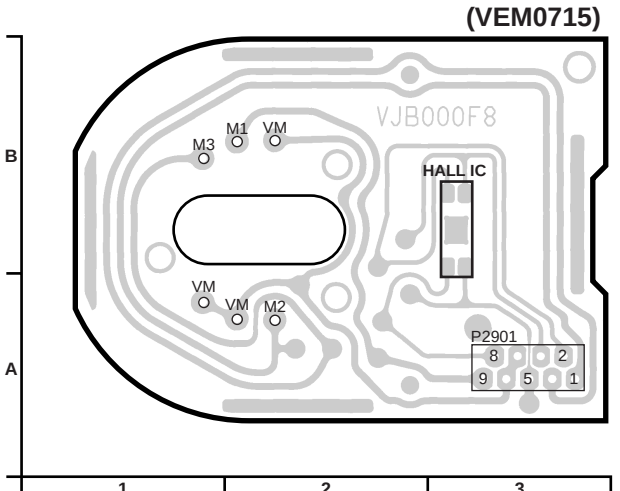
(VEP03G15A)



AV DECODER C.B.A.	
Transistor & Resistor	
QR37001	B-5
Integrated Circuit	
IC37001	B-6
IC37002	C-4
IC37003	B-4
IC37004	D-6
IC37005	F-7
IC37008	B-5
IC37009	E-4
IC37010	C-6
IC37011	B-5
IC37012	B-5
Connector	
P37001	D-1
P37003	F-3
P37004	F-5

ADDRESS INFORMATION

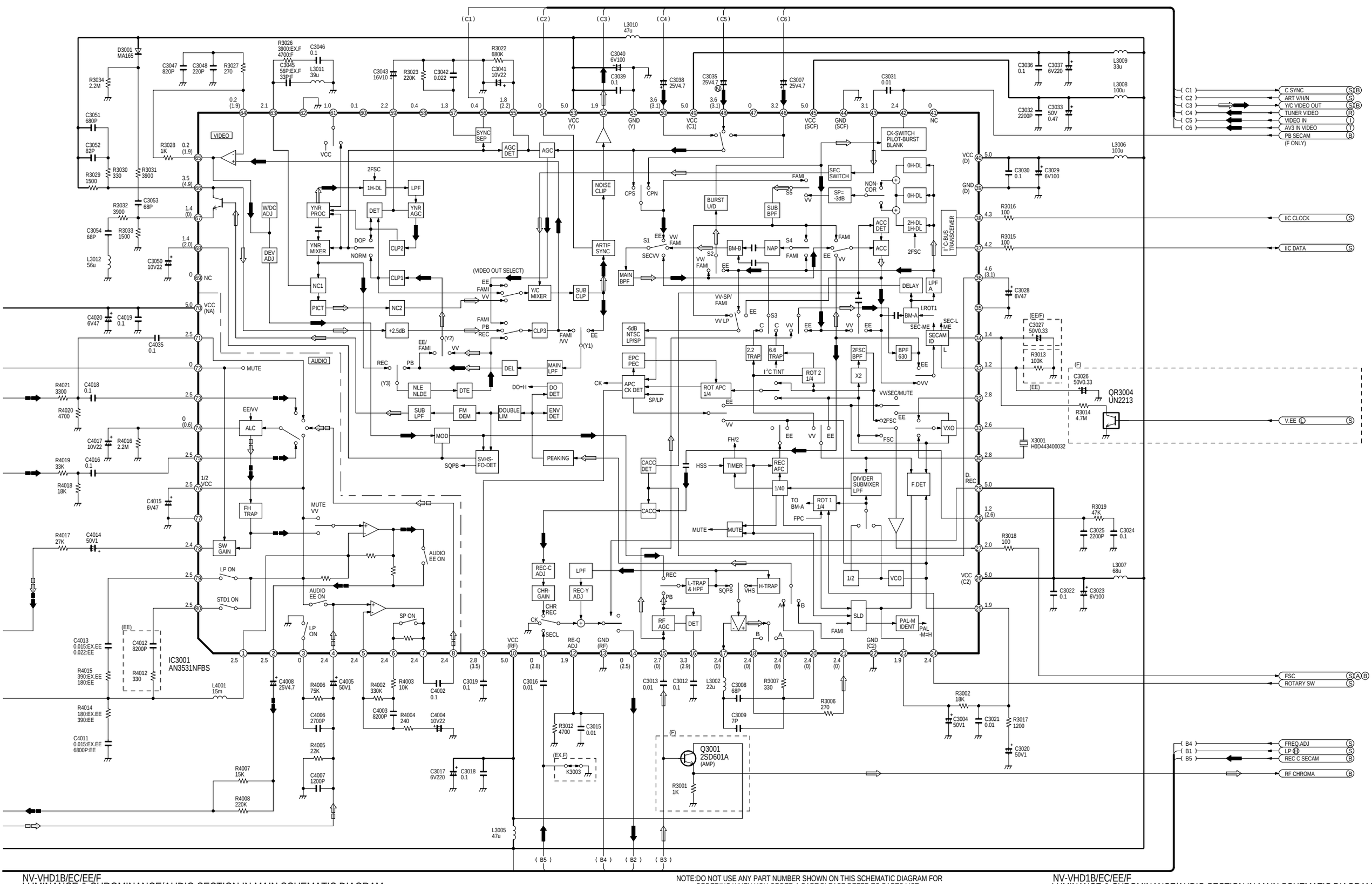
NV-VHD1B/EC/EE/F AV DECODER C.B.A.



CYLINDER STATOR UNIT	
Integrated Circuit	
HALL IC	B-3
Connector	
P2901	A-3

ADDRESS INFORMATION

NV-VHD1B/EC/EE/F
CYLINDER STATOR UNIT



NV-VHD1B/EC/EE/F
LUMINANCE & CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
LUMINANCE & CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓐ :TO Hi-Fi AUDIO SECTION
Ⓘ :TO INPUT/OUTPUT SECTION
Ⓣ :TO DISPLAY SECTION
Ⓓ :TO DECODER SECTION
Ⓑ :TO SECAM SECTION(F ONLY)

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

P4003 (TO A/C HEAD)
AUDIO ERASE IN 1
GND 2
A.HEAD (R) 3
A.HEAD (W) 4
CTL HEAD (-) 5
CTL HEAD (+) 6

P4002 (TO FULL ERASE HEAD)
FULL ERASE OUT 1
FULL ERASE IN 2

P3502 (TO CYLINDER UNIT)
LP R 1
LP COM 2
LP L 3
SP R 4
SP COM 5
SP L 6
GND 7
AUDIO HEAD L 8
AUDIO HEAD COM 9
AUDIO HEAD R 10

Ⓢ CTL HEAD (+)
Ⓢ CTL HEAD (-)
Ⓢ SHORT DET Ⓛ
Ⓢ BIAS Ⓛ
Ⓢ HEAD SW (A1)
Ⓢ H.AMP SW (A2)
Ⓢ ENV.SELECT (A3)
Ⓢ TRACKING ENV. (A4)
Ⓢ D.REC Ⓗ (A5)
Ⓢ CURR.EMPH Ⓗ (A6)
Ⓓ TUNER AUDIO OUT (A7)
Ⓐ P FAIL MUTE (A8)
Ⓐ AUDIO OUT(N) (A9)
Ⓢ FM MUTE Ⓗ (A10)
Ⓐ AUDIO IN(N) (A11)
Ⓐ AUDIO HEAD R
Ⓐ AUDIO HEAD COM
Ⓐ AUDIO HEAD L
Ⓢ D.A.REC Ⓗ
Ⓢ PAL EP Ⓗ
Ⓡ BIAS 5V
Ⓡ VIDEO 5V
Ⓡ GND

R4030 7500
C4032 680P
T4002 EQQ7QF024P
C4031 0.022
C4029 1500P
R4029 3300
0.3 (-0.6)
0.4 (4.7)
Q4006 2SD602A (OSC)
L4003 68u
C4030 6V220
C4028 0.022
0.4 (4.9)
5.0 (4.1)
Q4005 2SB710 (AUDIO ERASE DRIVE)
R4028 2700
C4026 10V22
R4027 3300
5.0
C4027 16V10
R4026 4700

IC3501
AN3368SB
TW2001
A1, A2
C3002 1000P
C3003 1000P
1 HEAD SW 2.4
2 HEAD AMP SW 0
3 0 (2.7) A19
4 A20 C3506 0.1 LB3501 VLP0147 0.7 (2.9)
5 GND
6 A18 C3507 0.1 LB3502 VLP0147 0.7 (2.9)
7 A17 C3508 0.1 LB3503 VLP0147 0.7 (2.4)
8 GND
9 A15 C3509 0.1 LB3504 VLP0147 0.7 (2.4)
10 0 (2.5) A16
11 0
12 NC 0
13 NC 0
14 NC 0
15 NC 0
16 NC 0
17 NC 0
18 NC 0
HA4, HA3, HA2, HA1
DET, DET, CMP
ZAP
CHROMA AMP
AT
VCC 36 5.0
NC 65 0
LP Ⓗ 32 0
31 1.4
30 2.4 (0)
GND 29
28 2.7 (1.9)
27 3.9 (2.2)
NC 26 0
REC Ⓗ 25 0 (4.9)
NC 24 0
CURR.EMPH 23 0
NC 22 0
NC 21 0
NC 20 0
NC 19 0
C3503 0.01
C3505 0.01
A3, A4, A5, A6

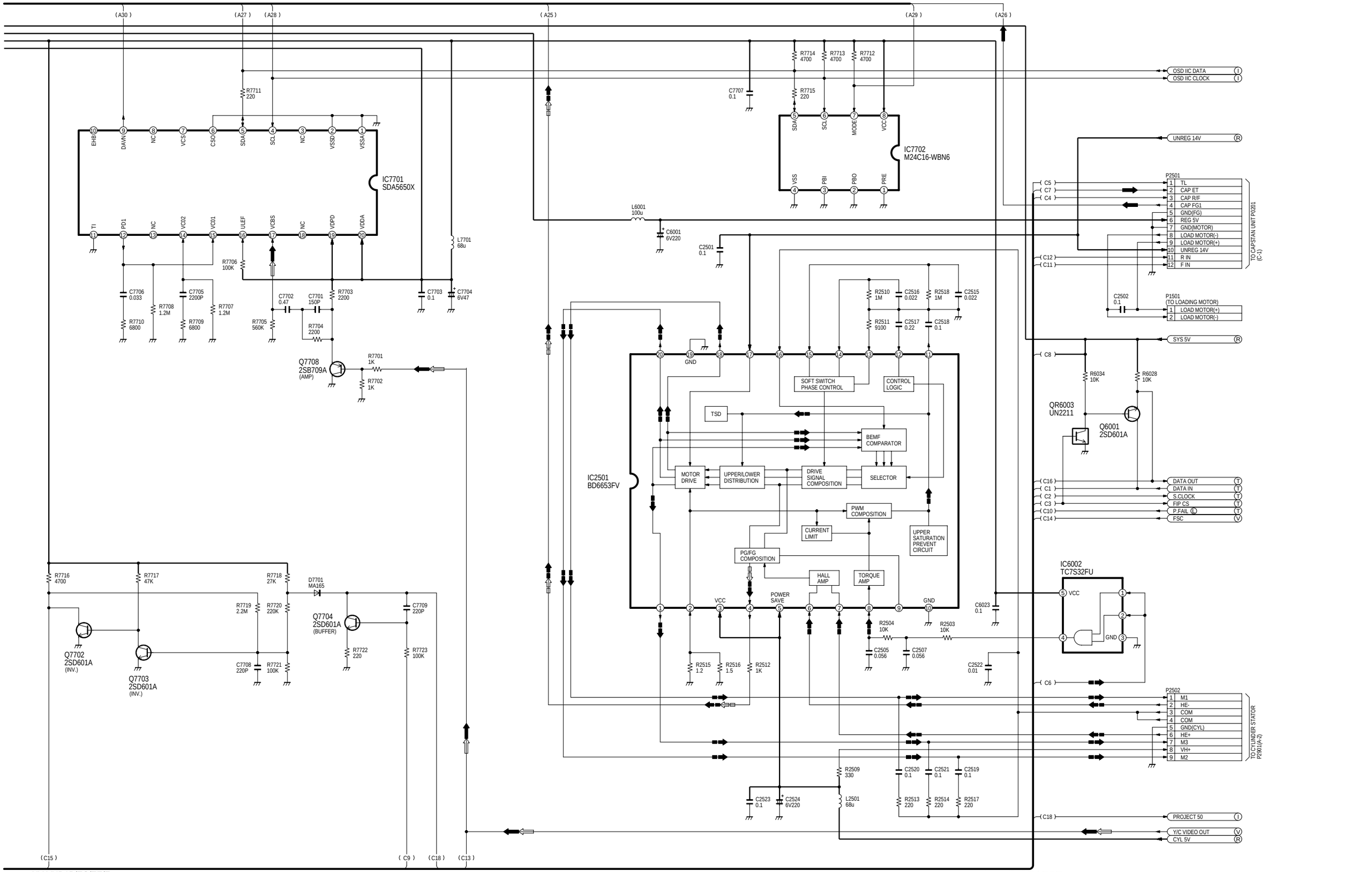
L3501 33u
C3501 6V47
C3502 0.01
TW3030
C3510 0.1
R3506 360
TW3001
R3501 100
C3511 0.1
B1, B2, B3
R3503 390
R3504 300
QR3502 UN2212 (LP Ⓗ:ON)
LB4001 0
C4036 2200P
QR4005 UN2113 (BUFFER) -0.4 (-0.1)
R4022 560
R3502 3900
QR3501 UN2212 (PAL EP Ⓗ:ON) -0.1
QR4001 UN2212 (PAL EP Ⓗ:ON) -0.1
QR4008 UN2215 -0.1
QR4009 UN2215 -0.1
C4033 100P
C4001 2200P
R4001 1K
R4011 470
C4010 0.027
QR4002 UN2211 (PAL EP Ⓗ:ON)
C4009 1
A7, A8, A9, A10, A11

R4009 2200 0.7 (-23.1)
Q4001 2SD601A (PB:ON) 0(3.6)
0 (-14.9)
R4010 2200 0.7 (-23.1)
Q4002 2SD601A (PB:ON)
QR4003 UN2111 (D.A.REC Ⓗ:OFF) 0 (4.9) 5.0(-23.0) 5.0

NOTE:THE MEASUREMENT MODE OF THE DC VLOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.(SP MODE)

NV-VHD1B/EC/EE/F
LUMINANCE & CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM



NV-VHD1B/EC/EE/F
SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION
Ⓐ :TO Hi-Fi AUDIO SECTION
Ⓣ :TO DISPLAY SECTION
Ⓘ :TO INPUT/OUTPUT SECTION
Ⓑ :TO SECAM SECTION(F ONLY)

CAPSTAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP

IC6001
M37970VXGD

IC1502
RPI354N
(S-REEL)

IC1501
RPI354N
(T-REEL)

IC7503
PST3628NR

IC7504
PST7043-MT

Q1501
PNB2301MBV
(T-PHOTO)

Q1502
PNB2301MAV
(S-PHOTO)

QR6001
UN2215
(AV1 PB Ⓛ:OFF)

Q7705
2SD601A
(AMP)

Q7707
2SB709A
(AMP)

S1501
K0G934A-00002

S7507
K0C111A00003
SAFETY TAB

D1501
SIR505S

NV-VHD1B/EC/EE/F
SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION
Ⓐ :TO Hi-Fi AUDIO SECTION
Ⓘ :TO INPUT/OUTPUT SECTION
Ⓓ :TO DECODER SECTION

DP7501
A2BD00000057

VCR S VHS
EXT Link
REC
ENR
S-VHS ET CH STB CVC VP EP SLP SP
ON OFF
REMAIN

C7501 0.01
R7508 47

Ⓡ HEATER(+)
Ⓡ HEATER(-)
Ⓡ FIP -29V

R7510 820
R7511 820
R7509 75

C7502 50V10

PS7502
TO FRONT JACK PP4801(D-1)
GND(AV) 1
KEY 2 2
KEY 3 3
AV3 IN(R) 4
5
POWER ON 6
7
AV3 IN VIDEO 8
GND(SYS) 9
AV3 IN(L) 10

Ⓐ AUDIO OUT 3(L)
Ⓥ AV3 IN VIDEO
Ⓢ POWER ON (H)
Ⓐ AUDIO OUT 3(R)

IC7501
M35502AFP

FLD0 -19.1
FLD1 -14.3
FLD2 -19.0
FLD3 -14.3
FLD4 -14.0
FLD5 -28.7
FLD6 -19.0
FLD7 -19.0
FLD8 -19.0
FLD9 -19.0
FLD10 -18.7
FLD11 -9.4
FLD12 -9.3
FLD13 -23.9
FLD14 -14.3
FLD15 -14.0
FLD16 -28.7
VEE -29.1

S DATA 3.9
S CLK 4.2
CS 2.3
AN3 5.2
AN2 5.2
AN1 5.2
AN0 5.2
VSS
OSC 2.3
VCC 5.2
FLD24 -24.1
FLD23 -24.1
FLD22 -24.1
FLD21 -24.1
FLD20 -24.1
FLD19 -24.1
FLD18 -24.1
FLD17 -23.7

C7503 12P

Ⓢ FIP.CS
R7513 18K
Ⓢ IR
PS7501
TO FRONT SWITCH PP7751(C-1)
5V(AD) 1
IR 2
GND(FIP) 3
KEY 1 4
KEY 0 5
6
R7516 18K
R7514 18K
5.2
12.1
QR7502
UN2212
(REG.5V)
5.2
Ⓡ PS 12V
R7515 18K
C7504 6V100
R7521 22K
R7517 10K
R7518 10K
Ⓢ S.CLOCK
Ⓡ SYS 5V

DIGITAL AUDIO OUT
IC4905
TQTX178A
GND 1
VCC 2 5.0
VIN 3 2.4

R4952 68K
R4954 330
4.2
Q4907
2SB709A
(AMP)
4.9
2.1
C4948 1
4.2
Q4906
2SD601A
(AMP)
1.8
1.2
R4953 47K
R4955 120
R4956 120
R4957 75
C4945 6V47

JK4901
K2HA304B0002
LB4901 220
LB4902 220
C4901 470P
C4902 470P
R4901 75
AUDIO OUT 1 (R)
AUDIO OUT 1 (L)
VIDEO OUT
RFC VIDEO OUT (I)
AUDIO OUT 1(L) (A)
AUDIO OUT 1(R) (A)

JK4904
K2HA408B0050
R4959 0
R4958 0
LB4911 220
LB4910 220
LB4909 220
C4947 470P
C4946 470P
C4911 470P
AUDIO OUT 2 (R)
AUDIO OUT 2 (L)
SUB WOOFER OUT
CVBS OUT

DVD YC OUT
JK4903
K1CB104B0017
R4934 75
R4935 75

PS 5V (R)
CVBS OUT (I)
R OUT (I)
G OUT (I)
B OUT (I)
P FAIL (L) (D)(S)
SUB WOOFER OUT (A)

P4301
TO DVD INTERFACE (DVD DISPLAY) P3000Z(B-11)
1 SW OUT
2 PFAIL(L)
3 R OUT
4 GND(AUD)
5 L OUT
6 GND(VID)
7 B OUT
8 G OUT
9 R OUT
10 Y OUT
11 C OUT
12 CVBS OUT
13 GND(VID)
14 CS
15 CLK
16 DATA OUT
17 DATA IN
18 GND(D)
19 A DIGITAL

DVD L OUT (A)
DVD R OUT (A)
DATA IN (S)
DATA OUT (S)

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
VCR DISPLAY SECTION IN MAIN SCHEMATIC DIAGRAM

VIDEO SIGNAL PATH

AUDIO SIGNAL PATH

PP0701
(TO TUNER)

4MHz	1
AGC	2
IF	3
GND	4

C0730 16V22 · R0735 100 · R0734 6800 · C0703 0.01 · R0711 5600 · R0724 150 · Q0702 2SD601A (AMP) · C0739 47P · R0733 39K · R0738 0 · C0734 1500P · QR0702 DTC363EU (SWITCHING) · R0713 180 · C0733 50V0.22 · R0726 560 · C0719 0.47 · C0740 0 · R0727 100 · C0728 50V0.1 · C0717 0.01 · L0706 150u · X0706 VLF1372 · C0741 0.01 · D0703 MA80WK · R0710 22K · L0707 150u · R0709 22K · C0705 0.01 · C0706 0.01 · C0707 0.01 · C0743 18P · C0742 33P · L0705 150u · C0721 0.01 · C0720 0.01 · D0701 MA80WA · R0707 22K · L0704 150u · R0706 22K · C0701 0.01 · L0703 0.68u · C0702 150P · L0702 0.18u · C0704 27P · X0704 VLF1416

1.9 24 · 1.9 23 · 4.4 22 OUTPUT2 · 0.1 21 · 5.0 20 VP · 1.5 19 · 1.8 18 A GND · 0.1 17 · 2.6 16 · 4.4 15 · 0 14 · 13

IC0701
C1AB00001598

RC VCO · DIGITAL VCO CONTROL · AFC DETECTOR · VIF-PLL · VIDEO TRAPS 4.5 TO 6.5MHz · VIF-AGC · TUNER AGC · SIF-AGC · SINGLE REFERENCE QSS MIXER/ INTERCARRIER MIXER AND AM-DEMODULATOR · NARROW-BAND FM-PLL DETECTOR · AUDIO PROCESSING AND SWITCHES · IIC-BUS TRANSCEIVER

2.0 1 · 2.0 2 · 0.1 3 OUTPUT1 · 2.5 4 · 2.5 5 · 2.5 6 · 7 D GND · 2.4 8 · 1.2 9 · 4.2 10 · 4.4 11 · 2.1 12

PK0701

DU7601-19	SYS IIC CLOCK	1
DU7601-20	SYS IIC DATA	2
DU7601-21	TUNER AUDIO(N)	3
DU7601-22	SIF/QRSK	4
DU7601-23	AFC S-CURVE	5
DU7601-24	TUNER VIDEO	6
DU7601-25	REG 5V	7
DU7601-26		8
DU7601-27	GND	9

4.4 · 4.2 · 0 · 0.2 · 0.2 · 1.0 · 5.0

TO POWER SUPPLY/RF SECTION(DU7601(0-10))

C0729 0.01 · R0732 1K · C0723 16V100 · C0722 0.1 · R0708 5600 · 2.7 · Q0703 2SB709 (AMP) · 2.1 · X0707 VLF1371 · C0708 0.01 · C0738 39P · C0709 0.01 · C0710 0.01 · C0714 0.01 · C0712 0.47 · R0741 0 · C0725 50V2.2 · R0750 5600 · R0757 7500 · VR0701 10KB · C0715 0.01 · C0716 390P · C0726 1500P · C0735 0.01 · R0722 5600 · R0717 5600 · R0755 100 · R0756 100 · R0737 100

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1F
TV DEMODULATOR PACK SCHEMATIC DIAGRAM

F E D C B A

1 2 3 4 5 6 7 8

VIDEO SIGNAL PATH

AUDIO SIGNAL PATH

(EE)

R0714 5600

R0732 4700

R0731 100

LB0701 VLP0147

R0713 0

R0740 470:B/EC 270:EE

R0729 10K

R0730 10K

R0701 100K

(B/EC)

(EC)

(B)

R0728 0

(EE)

R0709 100K

C0724 220P:EC/EE 330P:B

R0717 470

R0711 180

R0745 3.3M

C0707 50V2.2

T0701 EVQ5EC082P:EC EVQ5EC083P:B EVQ5EC081P:EE

C0717 33P

R0727 0

C0719 0.1

C0708 50V 0.47

R0742 150

Q0702 2SD601A (AMP)

R0741 220

C0721 120P:EC 82P:B 56P:EE

R0743 1K

PK0701

DU7601-19	SW1	1
DU7601-20	SW2	2
DU7601-21		3
DU7601-22	SIF/QPSK	4
DU7601-23	AFC S-CURVE	5
DU7601-24	TUNER VIDEO	6
DU7601-25	TUNER 5V	7
DU7601-26		8
DU7601-27	GND	9

TO POWER SUPPLY/ RF SECTION DU7601 (D-10)

1.6 2.4 2.6 5.0

IC0701 LA75503

3.1 2.4 1.6 3.0 2.7 2.2 3.3 4.3 4.3 1.8 0 1.3

BPF, BPF, LIM AMP, FM DET, DEEMPHP, AMP SW, EQ AMP, TRAP, S PLL, FIL CONT, LPF, VCO, FLL, AGC, AFT AMP, VIDEO DET, APC DET, 1ST SIF DET, VIF AMP, IF AGC, 1ST AMP, RF AGC

2.6 2.4 2.2 3.3 2.8 2.8 5.0 1.6 0.1 4.0 2.4

D0702 0

C0701 1

R0705 4700

R0708 10K

VR0701 10KB

R0707 39K

C0702 1000P

C0703 1

C0713 6V330

C0714 1

C0704 0.033

R0719 4700

C0712 0.1

X0704 VLF1493:A/C VLF1495:B VLF1497:D

L0701 0.18u:EC 0.22u:B 0.27u:EE

(EE)

X0702 VLF1431

X0701 VLF1416:EC VLF1417:B VLF1430:EE

C0710 0.01

L0703 2.2u:EC/EE 1.8u:B

R0725 100

C0715 3P: EC/EE 12P:B

PP0701 (TO TUNER UNIT)

4MHz	1
AGC	2
IF	3
GND	4

C0711 16V22

R0715 22K

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE
TV DEMODULATOR PACK SCHEMATIC DIAGRAM

Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION

VIDEO MAIN SIGNAL PATH IN REC MODE

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

Ⓥ C SYNC
Ⓥ Y/C VIDEO OUT
Ⓢ V.EE Ⓛ
Ⓡ VIDEO 5V
Ⓥ PB SECAM
Ⓢ SECAM Ⓛ
Ⓥ REC C SECAM
Ⓥ FSC
Ⓥ RF CHROMA

L5503 10u

Q5503 2SD601A (AMP)
Q5502 2SD601A (AMP)
Q5501 2SD601A (AMP)
QR5501 UN2211 (PAL:ON)
QR5502 UN2113 (V.EE Ⓛ :ON)
Q5504 2SB709A (V.EE Ⓛ :ON)
Q5505 2SD601A (PB:ON)

C5503 47P
C5504 22P
C5501 12P
C5502 120P
C5507 6V100
C5509 0.01
C5506 50V2.2
C5508 2200P
C5510 2200P
C5511 150P
C5512 0.01
C5513 0.1
C5514 0.01
C5515 0.01
C5517 0.022
C5516 50V1
C5518 220P
C5519 0.1
C5520 680P
C5521 0.01
C5522 16V10
C5523 1000P
C5524 50V0.47
C5525 120P
C5526 120P

L5501 120u
L5502 120u
L5504 6.8u
L5505 27u
L5507 270u
L5506 270u

R5503 22K
R5504 560
R5505 10K
R5506 560
R5501 180
R5508 56K
R5509 18K
R5511 12K
R5512 47K
R5510 8200
R5514 270K
R5513 13K
R5515 2200
R5516 2200
R5501 220
VR5501 500B
R5502 330
R5518 22K
R5519 2700
R5517 4700
R5520 22K
R5521 12K
R5522 5600
R5523 5600
R5524 18K
R5526 13K
R5525 47K
R5527 1K

IC5501 LA7337

SYNC GATE GEN V-SEP
SECAM DET
IREF
MUTE
4.3MHz OSC
FO ADJ.
CTL
FO ADJ.
1.1MHz OSC
SECAM Ⓗ AUTO Ⓜ MUTE Ⓛ
AFC DET
VCO
FILTER REF
BGP GEN
FO OFFSET
4.3MHz BPF A
SG
LIM
2.2MHz BPF
4.3MHz BPF B
1.1MHz BPF
1/4
REG. 4.2V
AGC AMP
AGC DET
VV Ⓗ EE Ⓛ
EE
VV

VCC

NOTE:THE MEASUREMENT MODE OF THE DC VLOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH SECAM COLOUR.(SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH SECAM COLOUR SIGNAL.(SP MODE)

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
SECAM SECTION IN MAIN SCHEMATIC DIAGRAM

Ⓑ :TO SECAM SECTION(F ONLY)
Ⓓ :TO DECODER SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION
Ⓐ :TO Hi-Fi AUDIO SECTION
Ⓘ :TO INPUT/OUTPUT SECTION
Ⓣ :TO DISPLAY SECTION

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

TU7601
TUNER UNIT
ENG47327G1:EC
ENG47328G1:B
ENG47329G1:EE
ENV57G04H6:F

Q1002 2SD602A (BUFFER)
Q1006 2SD601A (FIP ON/OFF CONTROL)
QR1001 UN2112 (FIP Ⓛ:ON)
QR1002 UN2211 (SLEEP Ⓛ:OFF)
QR1201 UN2212 (POWER OFF Ⓗ:ON)
Q1003 2SC1959Y (5V REG)
Q1004 2SC1959Y (5V REG.)
Q1005 2SD602A (5V REG.)
Q1007 2SC1959Y (12V REG.)
Q1008 2SB710A (POWER SAVE:OFF)
Q1201 2SC1959Y (5V REG.)
Q1202 2SC1959Y (5V REG.)
Q1203 2SC1959Y (5V REG.)

P1001
TO POWER P110(F-10)

DU7601
TO TV DEMODULATOR CK PK0701(D-1)

19	SW1	PK0701-1
20	SW2	PK0701-2
21	TUNER AUDIO	PK0701-3
22	SIF/QPSK	PK0701-4
23	AFC S-CURVE	PK0701-5
24	TUNER VIDEO	PK0701-6
25	TUNER 5V	PK0701-7
26		PK0701-8
27	GND	PK0701-9

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,USE ONLY THE SAME TYPE.

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

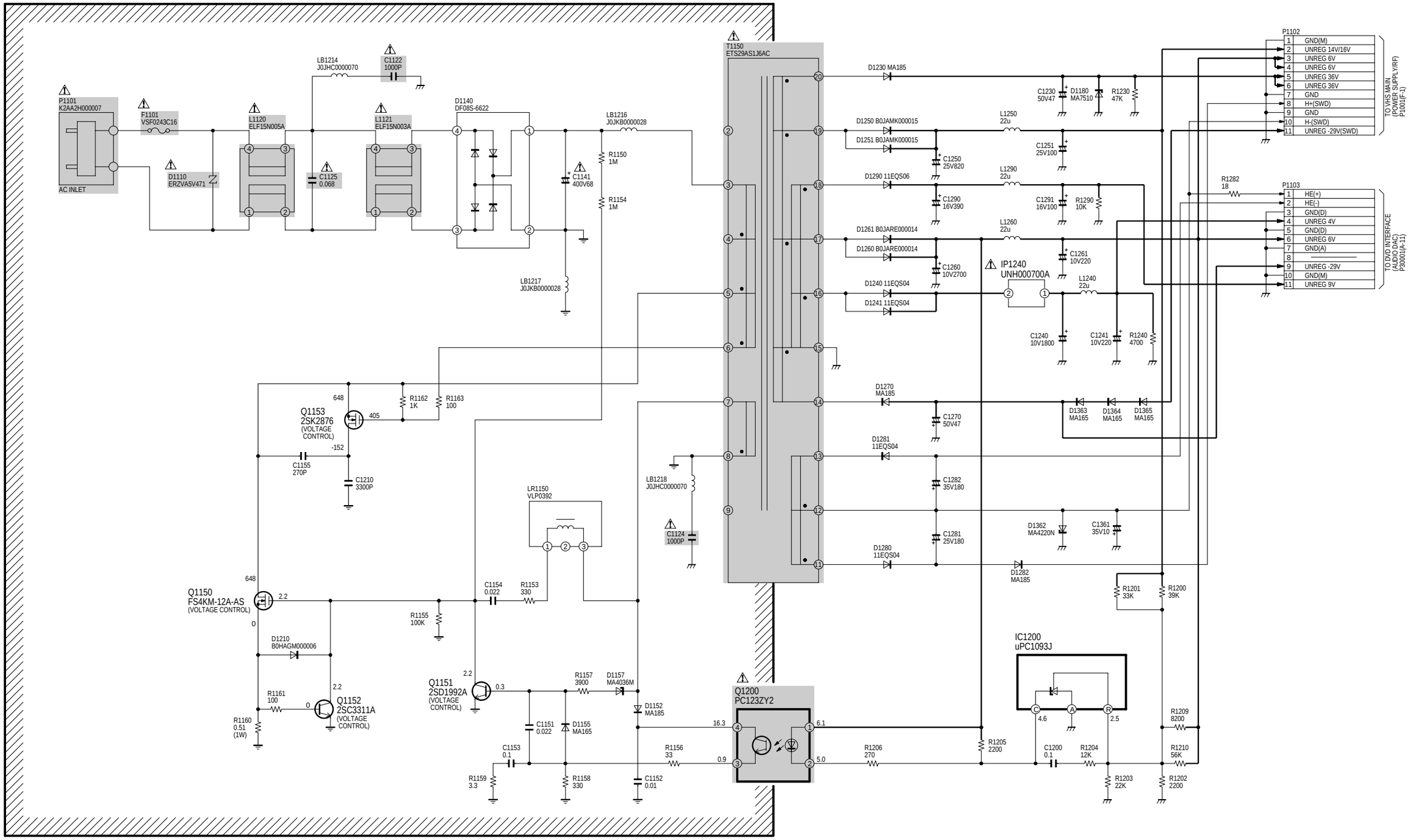
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
POWER SUPPLY/RF
SECTION IN MAIN SCHEMATIC DIAGRAM

CAUTION

THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

HOT



IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIALCHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,USE ONLY THE SAME TYPE.

NOTE1:WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT,SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE..... ⏚
SECONDARY SIDE... ⏚
NOTE2:THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NOTE:THE MEASURMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-VHD1B/EC/EE/F
POWER SCHEMATIC DIAGRAM

Ⓖ:TO AV DECODER SECTION

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

IC7002
C3ABKG000057
(4M DRAM)

IC7003
MN677203NP1
(NODC)

IC7008
TC7S32FU

IC7012
TC7S32FU

P37001

TO FEP & DRV(FP5202)

NOTE:THE MEASUREMENT MODE OF THE DC MOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
NODC SECTION IN AV DECODER SCHEMATIC DIAGRAM

REF No.30000 SERIES.

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓣ :TO DISPLAY SECTION
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION
Ⓐ :TO Hi-Fi AUDIO SECTION

(T)(R) RFC VIDEO OUT
(R) PS 12V
(R) PS 5V
(R) N.SW 5V
(T) R OUT (A21)
(T) G OUT (A20)
(T) B OUT (A19)
(S) AV2 PB
(A) AUDIO IN2(R) (A13)
(A) AUDIO IN2(L) (A12)
(A) AUDIO OUT2(L) (A11)
(A) AUDIO OUT2(R) (A10)
(A) AUDIO IN1(R) (A9)
(A) AUDIO IN1(L) (A8)
(A) AUDIO OUT1(L) (A7)
(A) AUDIO OUT1(R) (A6)
(S) PROJECT 50 (A5)
(S) AV1 B IN (A4)
(S) AV PB Ⓗ (A3)
(S) VIDEO OUT (A1)

(S) OSD IIC DATA
(S) OSD IIC CLOCK
(A) SUB WOOFFER MUTE
(T) CVBS OUT
(A) DVD Ⓗ
(R) TUNER VIDEO (B1)
(V) VIDEO IN (B2)
(S) PROG. Ⓗ (B3)

(A14) (A15) (A16) (A17) (A18) (A1) (A3) (A4)

L4903 68u
L4902 68u
L4906 68u
C4925 0.1
C4926 6V220
C4920 0.1
C4921 6V220
R4905 22K
R4904 15K
R4915 470
D4903 MA165
R4960 1K
R4926 470
R4928 1K
R4927 1K
Q4904 2SB709A (AMP)
R4909 22K
Q4901 2SD601A (AV1 PB Ⓗ:ON)
R4910 470K
D4904 MA165
R4902 470
R4945 15K
R4946 22K
C4916 0.1
C4919 0.1
C4929 0.1
C4928 0.1

IC4901
LA73021M
36 GND 34 33 32 31 30 29 28 N.SW 5V 26 25 GND 24 23 22 21 PS 5V 20 19 GND

FSS OUT
6dB
SW1
SW3
CLAMP
SERIAL CONTROL
IIC BUS INTERFACE
POWER SAVE
EXT CTL 4
EXT CTL 2
V REF
RIPPLE FLT
EXT CTL 3
EXT CTL 1
AMP
BUF
SW2

1 2 3 GND 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
0 4.8 4.8 3.1 1.9 2.3 6.2 0 10.9 1.8 12.3 0 0 3.4 1.6 1.6
12V

R4938 220
R4933 10K
C4937 0.1
C4943 0.1
C4944 0.1
C4942 0.1
C4941 0.1
R4941 10K
L4904 0
R4950 22K
R4951 22K
QR4902 UN2212 (DVD Ⓛ:ON)
R4947 10K
Q4905 2SD601A
QR4906 UN2214
R4929 75
D4905 MA165

IC4902 MM1508XNRE (SWITCH)
IC4903 MM1508XNRE (SWITCH)
IC4904 MM1508XNRE (SWITCH)
C4917 1
C4933 1
R4930 75
C4922 1
C4932 1
R4931 75
R4932 75
C4924 1
C4931 1
C4927 6V220
C4923 0.1
C4918 0.1
R4925 75
R4922 75
R4919 75

(B6) (B7) (B1) (B2) (B3) (B7) (B6)

TW4903 TW4907
TW4902 TW4901
LB4906 220
LB4905 220
C4915 470P
C4914 470P
R4918 330
R4916 330
C4913 470P
C4912 470P
C4909 47P
C4910 47P
L4901 0.22u
TW4906
JK4902(1/2) K2HZ242B0001 (AV1)

TV
1 AUDIO OUT (R)
2 AUDIO IN (R)
3 AUDIO OUT (L)
4 GND (A)
5 GND
6 AUDIO IN (L)
7 BLUE
8 PB +12V
9 GND
10 CONTROL
11 GREEN
12 DATA
13 GND
14 GND
15 RED
16 BLANKING
17 GND
18 GND
19 VIDEO OUT
20 VIDEO IN
21 GND

TW3003 TW3002
R4913 75
R4914 75

Q4903 2SD601A (RGB ON:ON)
R4903 4700
R4949 22K
R4948 47K
QR4903 UN2214 (RGB OFF Ⓗ:ON)
LB4904 220
LB4903 220
C4905 470P
C4906 470P
R4912 330
R4906 330
C4907 47P
C4908 47P

JK4902(2/2) K2HZ242B0001 (AV2)

DECODER/EXT
1 AUDIO OUT (R)
2 AUDIO IN (R)
3 AUDIO OUT (L)
4 GND (A)
5 GND
6 AUDIO IN (L)
7 BLUE
8 PB +12V
9 GND
10 -/CONTROL
11 GREEN
12 -/DATA
13 GND
14 GND
15 RED
16 BLANKING
17 GND
18 GND
19 VIDEO OUT
20 VIDEO IN
21 GND

R4908 75
R4911 75
QR4905 UN2215 (PROG Ⓗ:ON)
QR4904 UN2215 (PROG Ⓗ:ON)
D4902 MA4051NM
D4901 MA4051NM

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.(SP MODE)

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER APART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
INPUT/OUTPUT SECTION IN MAIN SCHEMATIC DIAGRAM

G F E D C B A
1 2 3 4 5 6 7 8 9 10 11

Ⓓ :TO DECODER SECTION
Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION
Ⓘ :TO INPUT/OUTPUT SECTION
Ⓣ :TO DISPLAY SECTION

AUDIO MAIN SIGNAL PATH IN REC MODE

AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

Ⓢ FM MUTE Ⓗ
Ⓢ IIC CLOCK
Ⓢ IIC DATA
Ⓥ FSC
Ⓘ AUDIO OUT2(R)
Ⓥ P FAIL MUTE
Ⓘ AUDIO OUT2(L)
Ⓣ Ⓘ AUDIO OUT1(R)
Ⓣ Ⓘ AUDIO OUT1(L)
Ⓡ PS 5V
Ⓡ PS 12V
Ⓡ GND
Ⓡ GND(Hi-Fi)
Ⓡ RFC AUDIO OUT
Ⓣ SUB WOOFFER OUT
Ⓢ AUDIO MUTE Ⓗ (EX.F)
Ⓘ SUB WOOFFER MUTE
Ⓥ AUDIO IN(N)
Ⓣ DVD R OUT
Ⓣ DVD L OUT
Ⓘ DVD Ⓗ
Ⓣ AUDIO OUT 3(R)
Ⓣ AUDIO OUT 3(L)
Ⓓ DEC R OUT
Ⓘ AUDIO IN1(R)
Ⓘ AUDIO IN2(R)
Ⓓ DEC L OUT
Ⓘ AUDIO IN1(L)
Ⓘ AUDIO IN2(L)
Ⓥ AUDIO HEAD COM
Ⓥ AUDIO HEAD R
Ⓥ AUDIO HEAD L
Ⓢ A.HEAD SW
Ⓢ ABS NORMAL Ⓗ
Ⓢ D.FM REC Ⓗ
Ⓢ PB 60Hz Ⓗ
Ⓥ AUDIO OUT(N)

QR4510 UN2213
QR4503 UN2216 (MUTE)
QR4504 UN2216 (MUTE)
QR4501 UN2216 (MUTE)
QR4502 UN2216 (MUTE)
QR4505 UN2113 (BUFFER)
QR4506 UN2216 (MUTE)
QR4509 UN2113
Q4501 2SD601A
QR4507 UN2211 (PB 60Hz: Ⓗ)

IC4502 NJM4558M
IC4503 HCF4053M013TR
IC4501 AN3656NFBPBV

IIC BUS INTERFACE
SWITCH RCH
SWITCH LCH
OUTPUT SELECT SWITCH RCH
OUTPUT SELECT SWITCH LCH
NORMAL OUTPUT SWITCH
INPUT SWITCH RCH
INPUT SWITCH LCH
PNR RCH
PNR LCH
AGC & SWITCH
FM MODULATOR/ DEMODULATOR
LPF
BPF
AGC
PREAMP & SWITCH
DET

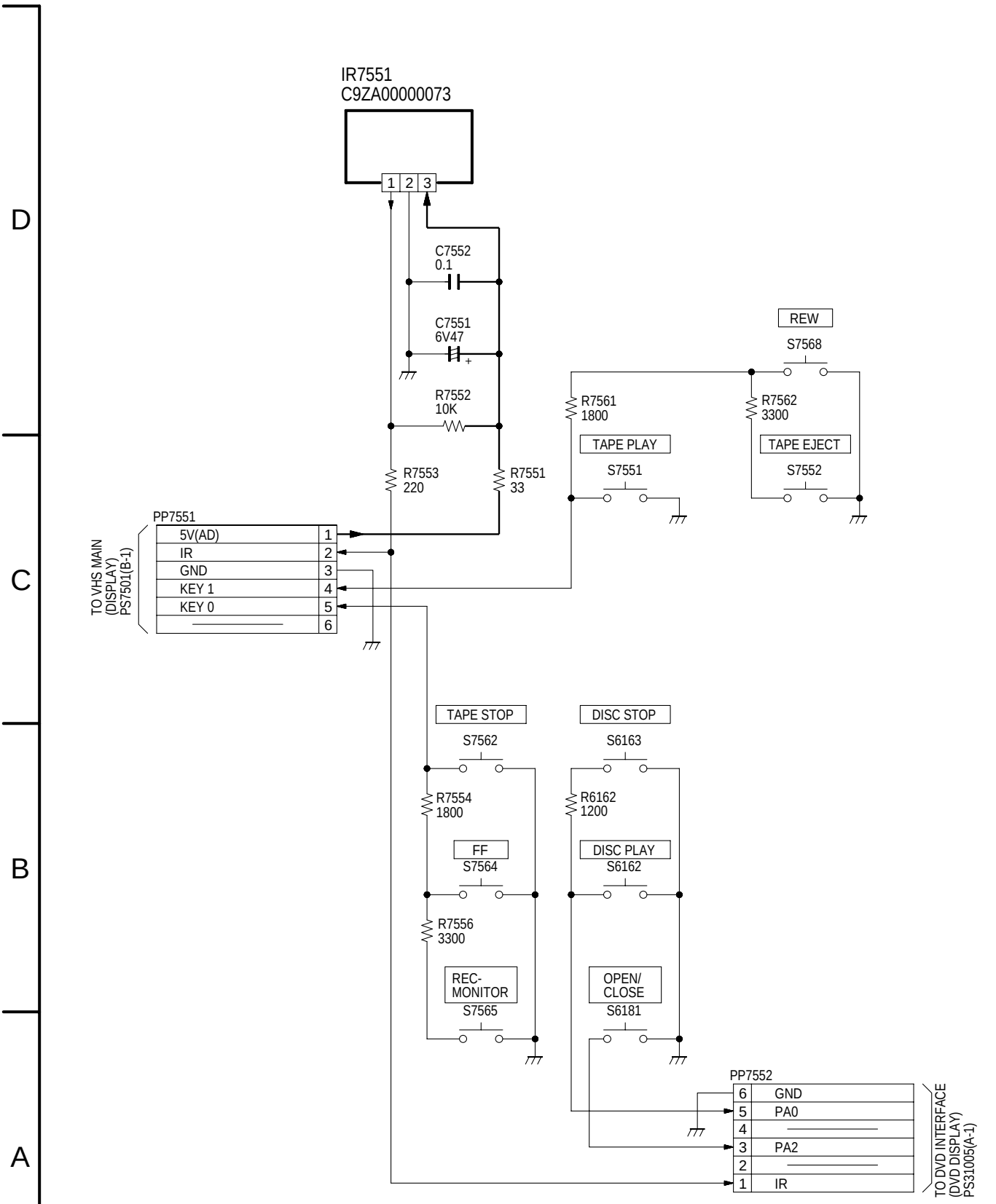
D4503 MAZ4056NHF
D4504 MA165
D4502 MA165
TW4502
TW4501
TL4503
L4502 1.2u
L4501 0

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.(SP MODE)

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
Hi-Fi AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

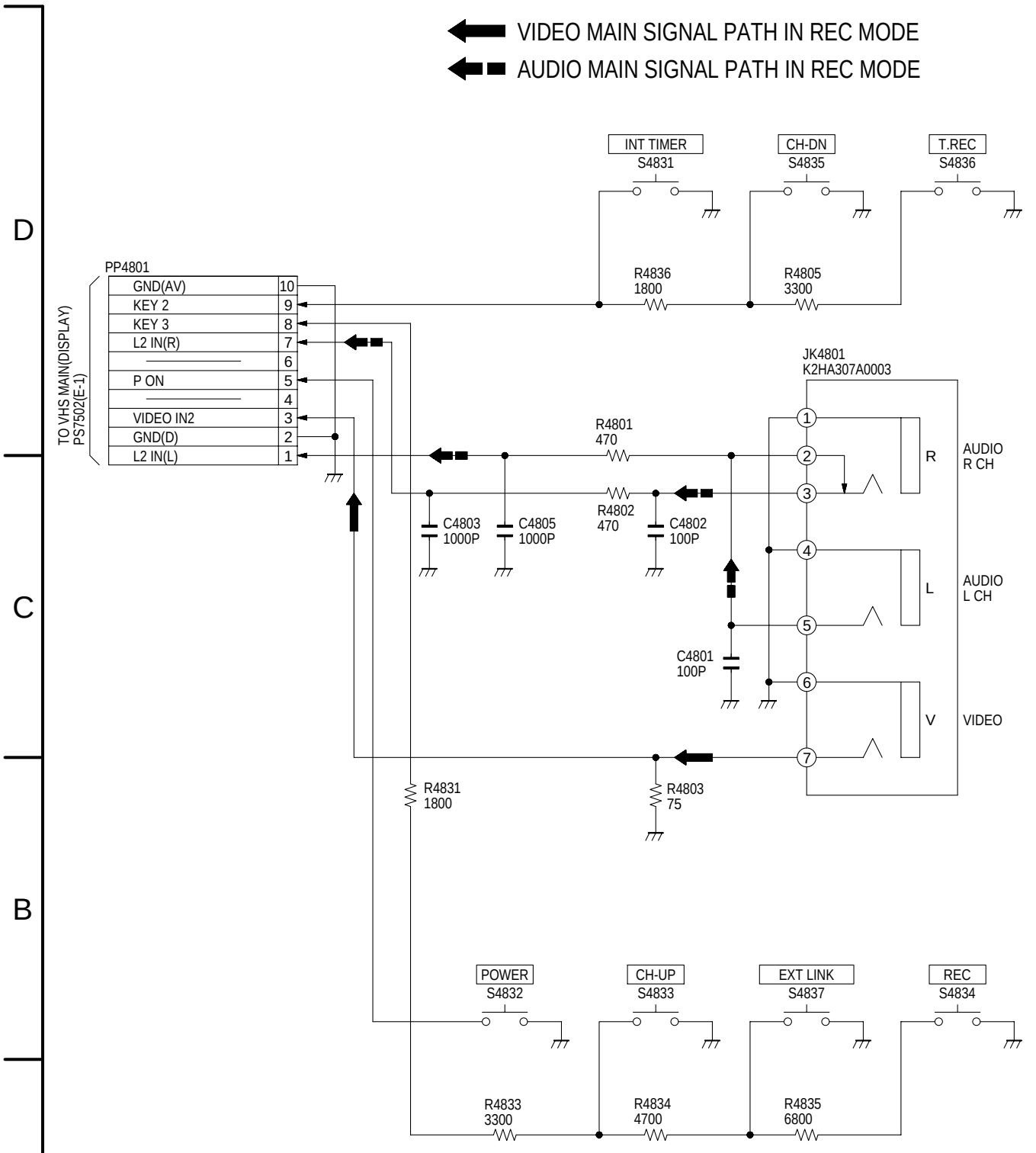


NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
FRONT SWITCH
SCHEMATIC DIAGRAM

D C B A

1 2 3



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
FRONT JACK
SCHEMATIC DIAGRAM

MAIN SIGNAL PATH

IC2501
C0GBG0000020(BA5823FM-E2) or
C0GBG0000033(BA5833FM-E2)
(MOTOR DRIVE)

1.6	1	BIAS1	LDCNT 28	3.2
1.6	2	VIN1	MUTE3 27	3.3
1.6	3	VIN2	TRIN 26	1.6
2.0(1.4)	4	OPIN+	BIAS2 25	1.6
2.0(2.3)	5	OPIN-	LDIN 24	1.6
1.6(0)	6	OPOUT	VIN3 23	1.8
	7	GND(PRE)	PREVCC 22	5.0
		FIN	FIN	5.0
5.0	8	VCC(CH1,2)	VCC(CH3,4) 21	5.0
0 (3.3)	9	MUTE12	MUTE4 20	3.2
	10	GND(CH1,2)	GND(CH3,4) 19	
2.9	11	VD2-	VD3- 18	3.8(2.5)
2.9	12	VD2+	VD3+ 17	3.8(5.9)
2.9	13	VD1-	VD4- 16	4.3
2.9	14	VD1+	VD4+ 15	4.3

IC5201
AN8708FHK
(FEP)

	1	GND1			
0 (0.5)	2	LPC1			
4.6 (3.3)	3	LPCO1			
0	4	LPC2			
4.6	5	LPCO2			
1.6	6	FBAL			
1.6	7	TBAL			
1.7 (1.4)	8	PORLT			
3.3	9	SEN			
2.7	10	SCK			
3.3	11	STDIO			
1.8	12	VREF1			
1.6	13	TE	1.6	25	VCC2
	14	VSS	3.3	26	FLTOP
0	15	OFTR	1.8	27	FLTON
3.3(0)	16	BDO	1.8	28	SAG
0.5	17	VDD	1.0	29	DCAGC
3.3	18	RSCL	1.7	30	AGCG
1.6	19	GND2	0.6 (1.4)	31	TESTSG
1.6	20	FE	0	32	RFINP
1.6 (2.1)	21	FS	2.2	33	RFINN
1.6	22	VHALF	2.2	34	DCRF
1.6	23	OFTSL	1.6 (0.6)	35	PEAK
1.6	24	BDOSL	1.6 (2.0)	36	RFENV
1.6	25	VCC2	1.6 (0.9)	37	VCC1
3.3	26	FLTOP		38	VIN5
1.8	27	FLTON		39	VIN6
1.0	28	SAG		40	VIN7
1.7	29	DCAGC		41	VIN8
0.6 (1.4)	30	AGCG		42	VREF2
0	31	TESTSG		43	VIN1
2.2	32	RFINP		44	VIN2
2.2	33	RFINN		45	VIN3
2.2	34	DCRF		46	VIN4
1.6 (0.6)	35	PEAK		47	VIN9
1.6 (2.0)	36	RFENV		48	VIN10

TO
OPTICAL PICKUP UNIT
FP5201

T+	30
F+	29
F-	28
T-	27
3.3VHFM	26
GND	25
LD+(DVD)	24
GND	23
GND	22
RFP	21
RFN	20
F1(DVD)	19
F2(DVD)	18
GAINH/L	17
PIN(DVD)	16
VREF2.2(DVD)	15
TA(DVD)	14
TD(DVD)	13
TC(DVD)	12
TB(DVD)	11
VCC5V	10
FE1	9
GND	8
LD+(CD)	7
T1(CD)	6
VREF2.2(CD)	5
FE2(CD)	4
T2(CD)	3
PIN(CD)	2
GND	1

TO P37001
AV DECODER C.B.A.
FP5202

1	DGND
2	DGND
3	D+5V
4	D+5V
5	M+9V
6	M+9V
7	M+9V
8	MGND
9	MGND
10	MGND
11	MGND
12	MUTE 3
13	MUTE 1
14	DMV
15	FO IN
16	TR IN
17	SPD IN
18	TRAYIN
19	TRAYREF
20	TRVSIN
21	MUTE2
22	TRAY/TRV
23	IN-SW
24	LDCUR
25	VREF2
26	A+5V
27	REFNV
28	TSTSG
29	NARF
30	APF
31	AGND
32	A+3.3V
33	A+3.3V
34	VHALF
35	FS
36	FE
37	TE
38	AGND
39	BDO
40	OFTR
41	FEPDATA
42	FEPCLK
43	FEPENB
44	AGND
45	TBAL
46	FBAL
47	AGND
48	GAINH/L
49	HFMON
50	AGND

TRVS MOTOR M2502
DM MOTOR M2501
QR5251 UN2121-TX (SWITCHING 3.3VHFM)
Q5211 2SB1115-T (LD DRIVE)
Q5215 2SB1115-T (LD DRIVE)
D5251 MA2J72800L
L5201 ELJEA100KF
L5202 ELJEA100KF
L5251 ELJEA100KF
SW2501 RSH1A048-A
RA2501 47Kx4
RA5231 100x4

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS PLAYBACK MODE.

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR OPDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST.AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NV-VHD1B/EC/EE/F
FEP & DRV IN TERMINAL SCHEMATIC DIAGRAM

Ⓒ :TO AUDIO DAC SECTION

DP7501
I3-BT-196GNK

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

F- P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14 P15 P16 G13 G12 G11 G10 G9 G8 G7 G6 G5 G4 G3 G2 G1 F+

TL36008

SEG18 SEG17 SEG16 SEG15 SEG14 SEG13 SEG12 SEG11 SEG10 SEG9 SEG8 SEG7 DGT1 DGT2 DGT3 DGT4 DGT5 DGT6 DGT7 DGT8 DGT9 DGT10 DGT11 DGT12 DGT13

SEG19 SEG20 SEG21 SEG22 SEG23 SEG24 SEG25 SEG26 SEG27 SEG28 SEG29 SEG30 SEG31 SEG32 MICDET VOICEDET SPVSS LED KARAOKE-LED DLBY LED HPVSS LED SEG39 SEG40 SEG41 SEG42 VPP

NP MUTE P65 P66 TRAY/TRV P54 P53 P52 P51 P50 IIC CLK NP OFF L/P31 IIC DATA TRAY CLOSE TRAY OPEN CS/P23 P22 P21 REMOCON P15 TRAY MUTE/P14 P13 P12 RIN/P11 FIN/P10 /RST

P00/TALK P01/LSN P02/CLK CMD STAT DSPCLK P06 VDD OSC2 OSC1 VSS XI XO MMOD VREF PA0 PA1 PA2 PA3 PA4 PA5 PA6 PA7 REF+ NFLOFF

IC6001
MN101C35DPB
(8 BIT MICROCOMPUTER)

TL36004

X6001
H2D800400009

C6004 6V220
C6025 0.1
C6006 50V10
C6024 0.1
C6001 0.1
C6002 0.1

TL36006 TL36007 TL36005

R6060 10K
R6051 22K
R6050 22K
Q6003 2SD602A (FL DRIVE)
Q6001 2SD601A

HEATER (-)
HEATER (+)
NP MUTE

TW36001 TCK
TW36002 TDI
TW36003 /TRST
TW36004 TDO
TW36005 TMS
TW36006 /RESET

TMS TCK TRAY CLOSE TDI RESET TRST TDO A DIGITAL C OUT NFL OFF NP OFF

R6065 470
R6066 470
R6063 4700
R6064 4700
R6035 0
R6061 15K
R6041 10K
R6040 10K
R6037 27K
R6052 4700

K6003
K6006

P30005(TO DVD UNIT)
1 TRAV SW
2 GND(D)

UNREG 6V
UNREG -29V

DSP CLK STATUS CMD Y OUT R OUT G OUT
B OUT
CVBS OUT
AL OUT AR OUT

P30002
1 NOT USED
2 PFAIL(L)
3 AR OUT
4 GND(AUD)
5 AL OUT
6 GND(VID)
7 B OUT
8 G OUT
9 R OUT
10 Y OUT
11 C OUT
12 CVBS OUT
13 GND(VID)
14 CS
15 CLK
16 DATA OUT
17 DATA IN
18 GND(D)
19 A DIGITAL

TO VHS MAIN(DISPLAY) P4301(B-10)

BOTTOM5

QR6001 DTC114TK
QR6002 UN221L
QR6003 UN221L

R6042 4700
R6043 4700
R6044 10K

R6055 R6054 R6053 C6016 0.01 C6018 0.01
R6049 R6048
R6047 10K R6046 R6045 10K

D6001 MA723
L6001 100u

R6059 R6058 R6057 R6056 R6072 4700

A3 A4 A2

PS31005
TO FRONT SWITCH PF7552(A-3)
IR 1
PA3 2
PA2 3
PA1 4
PA0 5
GND 6

(A1) (A2) (A3) (A4)

REF.NO.30000 SERIES

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
DVD DISPLAY SECTION IN DVD INTERFACE SCHEMATIC DIAGRAM

Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓐ :TO Hi-Fi AUDIO SECTION
Ⓣ :TO DISPLAY SECTION
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION

AUDIO SIGNAL PATH

L7301 1u
C7302 6V100
X7302 VSX0953
C7316 0.1
R7301 8200
R7304 0
C7315 0.1
R7302 0
C7311 0
D7301 MA165
C7331 1
R7312 0
C7312 0.1
R7305 100
R7306 100
C7305 33P
C7306 33P
C7341 4700P
C7342 4700P
FL7301 VLF0633
C7304 6V100
C7301 0.01
R7316 10K
LB7301 0
C7303 0.01
TL7301
TL7303
(F) R7313 220
C7318 6V47
TL7304
R7308 220
C7324 1500P
C7326 16V10 (EX.F)
R7328 220
C7319 16V10
R7329 220
C7320 16V10
LB7302 J0JBC0000011
C7325 0.1
C7323 0.1
C7314 0.1

Ⓡ QPSK/SIF
ⓋⓇ TUNER AUDIO OUT
Ⓣ P FAIL Ⓛ
Ⓡ REG 5V
Ⓢ IIC CLOCK
Ⓢ IIC DATA
Ⓐ DEC R OUT
Ⓐ DEC L OUT

	22	21	20	19	18	17	16	15	14	13	12	23	24	25	26	27	28	29	30	31	32	33	
	TEST1	VDDA2	VSSA2	VDDR2	1 REF	TEST2	TP3	XTAL I	XTAL O	ADDR1	PCLK	SIF2	VREF1	SIF1	CRESET	VSSA3	VDDA3	SCL	SDA	SDO	WS	SCK	
	3.3			2.0			1.6	1.6		0.4		2.0	2.0	2.0	4.9		4.9	4.8	4.6	1.2	1.2	1.2	

	34	35	36	37	38	39	40	41	42	43	44	11	10	9	8	7	6	5	4	3	2	1	
	SYS CLK	VDDD3	VSSD3	P1	MONO IN	EXTIR	EXTIL	VREF2	P2	OUT M	VSSA4	TP1	NICAM	TP2	VDEC2	VSSD2	VDDD1	VSSD1	VSSA1	VDDA1	OUT R	OUT L	
	1.2	4.8		4.9	2.4	2.4	2.4	2.4	4.9	2.5			0.4		0		4.8			4.9	2.5	2.5	

INPUT SWITCH AGC, ADC
FM/AM DEMODULATION
IDENTIFI-CATION
IIC BUS INTERFACE
IIC BUS INTERFACE
NICAM DEMODULATION
DEMATRIX
NICAM DECODER
2 CHANNEL ANALOG/ SATELLITE DECODER
DIGITAL SELECTOR
LEVEL ADJUST
POST FILTER 3 DACS
2 CHANNEL OUTPUT BUFFERS
ANALOG CROSSBAR SWITCH
MONO CHANNEL OUTPUT BUFFERS

IC7301
TDA9874AH

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

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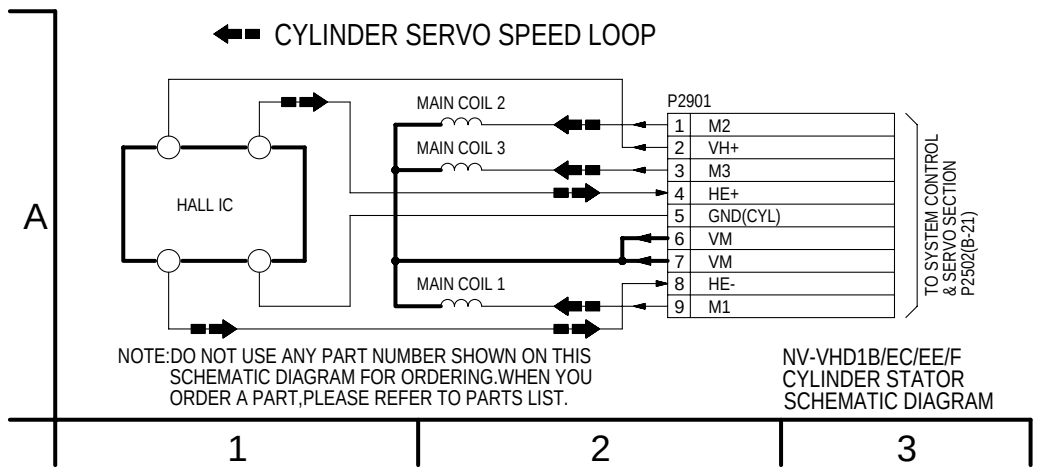
NV-VHD1B/EC/EE/F
DECODER SECTION IN MAIN SCHEMATIC DIAGRAM



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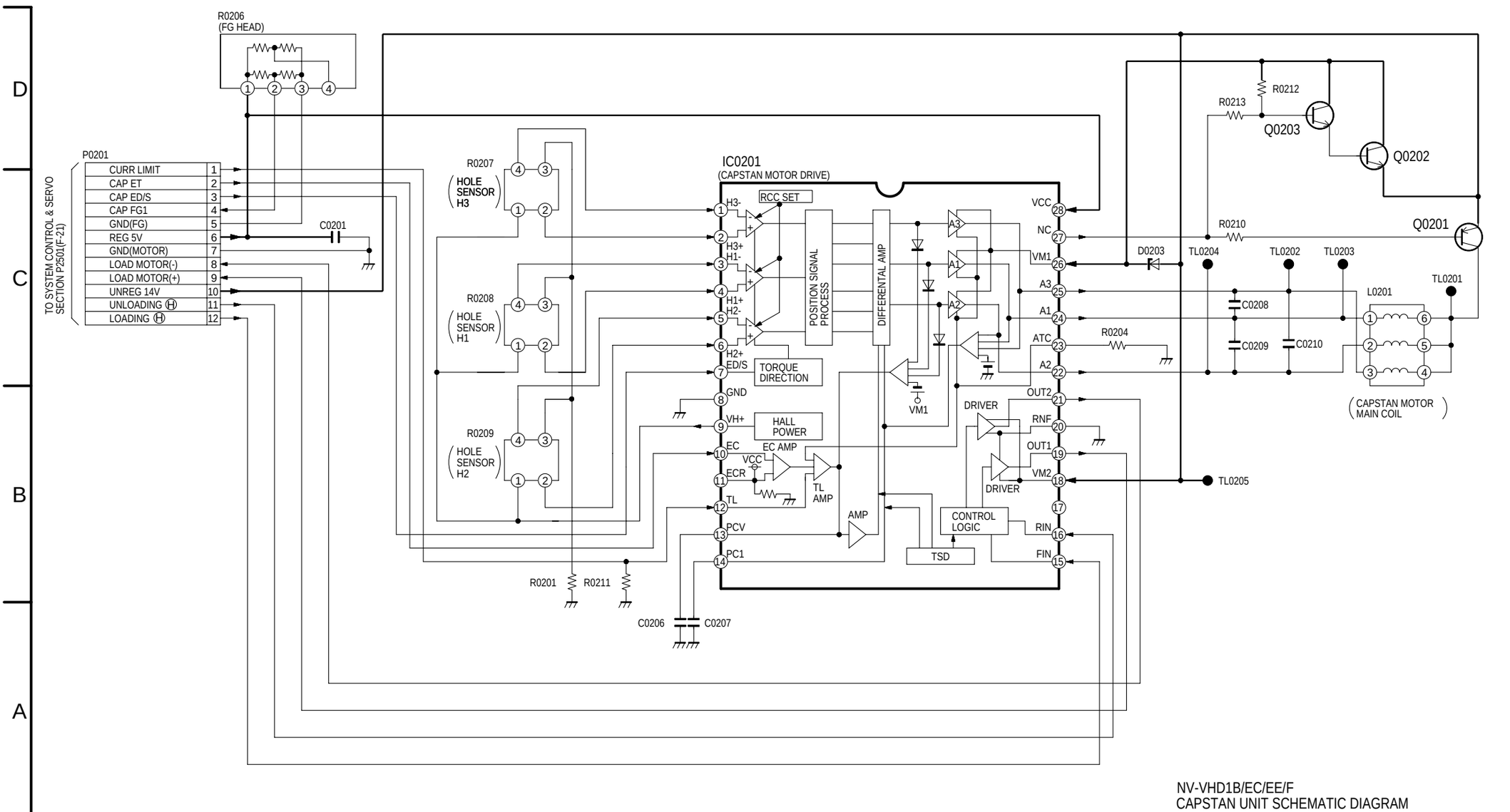
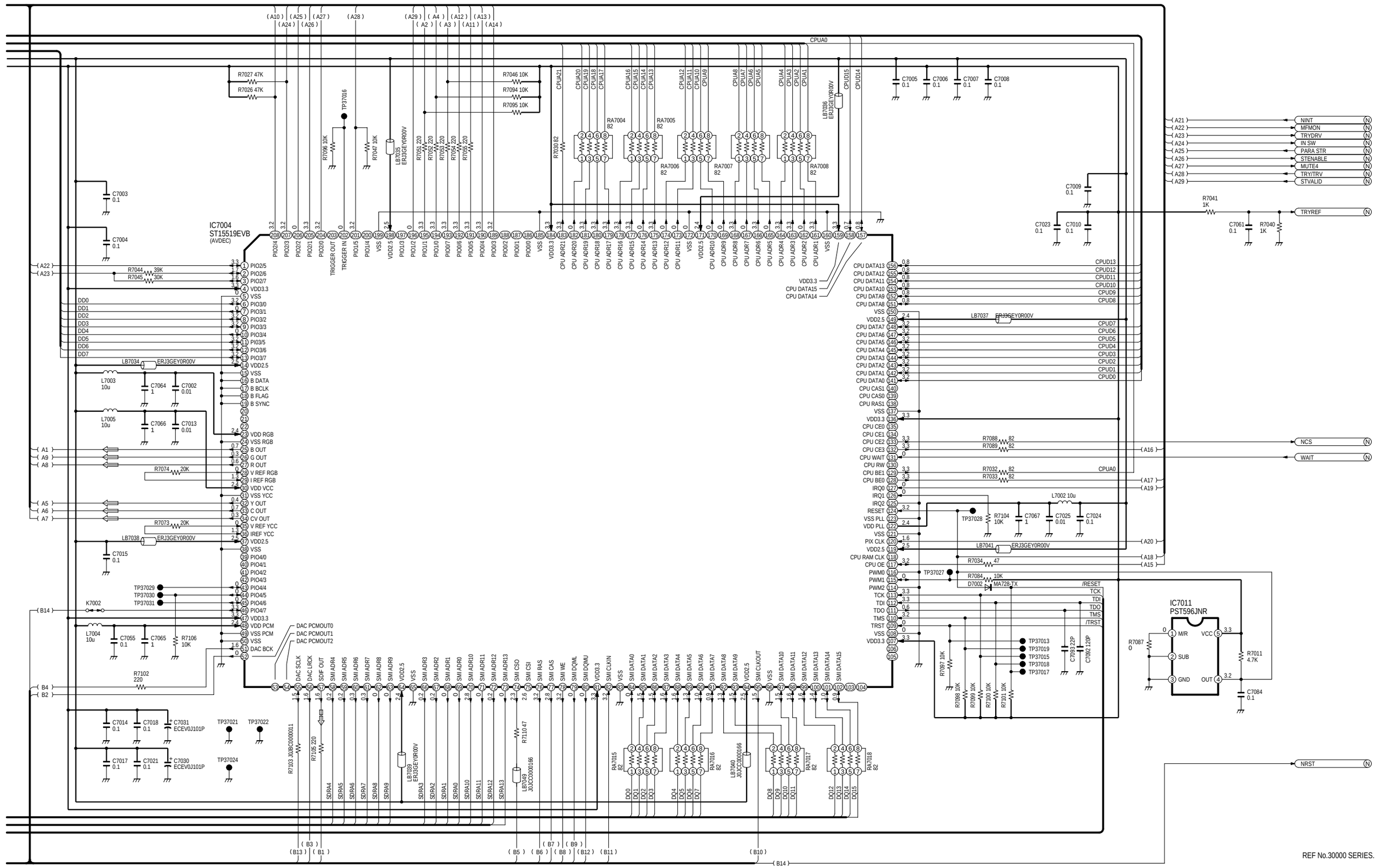
NV-VHD1B/EC/EE/F
CYLINDER STATOR
SCHEMATIC DIAGRAM



NV-VHD1B/EC/EE/F
CAPSTAN UNIT SCHEMATIC DIAGRAM



REF No.30000 SERIES.

NV-VHD1B/EC/EE/F
AV DECODER SECTION IN AV DECODER SCHEMATIC DIAGRAM

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
AV DECODER SECTION IN AV DECODERSCHEMATIC DIAGRAM

Ⓝ :TO NODC SECTION

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

P37003

TO DVD INTERFACE P30003(G-11)

B
GND(V)
DSP CLK
STATUS
CMD
GND(D)
M+9V
GND(M)
D+5V
D-2.5V
GND(D)
GND(D)
3.3V
GND(D)
A+5V
GND(A)
Y
GND(V)
C
CVBS
R
G

LB7045 ERJ3GEY0R00V
LB7043 ERJ3GEY0R00V
LB7042 ERJ3GEY0R00V
LB7044 ERJ3GEY0R00V

TP37025

Ⓝ A+3.3V
Ⓝ A+5V
Ⓝ D+5V
Ⓝ M+9V

GND

C7054 0.1
C7053 0.1

Ⓝ NRD
Ⓝ NWR

Ⓝ CPUD0 … Ⓝ CPUD7

Ⓝ CPUA0 … Ⓝ CPUA17

Ⓝ DD0 … Ⓝ DD7

C7056 0.1
C7001 0.1

IC7001
M29W800DT-90
(FLASH ROM)

TP37002
TP37003
TP37001

C7016 0.1
C7019 0.1

IC7009
K4S641632E-TC75
(16M SDRAM)

R7111 680
RA701 4 82

C7057 0.1

R7037 1M
X7002 H0J270500016 (27MHz)
R7043 390
C7085 15
C7086 15P
R7072 47

IC7010
TC7WU04FUTE12L
(INV.)

R7071 47
TP37026

P37004

TO DVD INTERFACE P30004(C-11)

ADIGITAL
GND(D)
TCK JTAG
TRV SW /SW
TDI JTAG
/TRST JTAG
TDO JTAG
MDI
MC
ML
SCLK
BCLK
SDATA
LRCLK
AC3/DACMUT
GND(ADAC)
MIXL
GND(ADAC)
MIXR
/RESET
AMUTE(H)
TMS JTAG

TCK
TDI
/TRST
TDO

R7082 100
R7081 100
R7080 100
R7056 220
R7077 100
R7076 100

LB7047
J0JBC0000011

/RESET
TMS

R7083 10K
R7093 47
R7109 680

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-VHD1B/EC/EE/F
AV DECODER SECTION IN AV DECODER SCHEMATIC DIAGRAM

Ⓕ :TO DVD DISPLAY SECTION

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

Ⓕ DSP CLK
Ⓕ STATUS
Ⓕ CMD
Ⓕ Y OUT
Ⓕ R OUT (A1)
Ⓕ G OUT (A2)
Ⓕ B OUT (A3)
Ⓕ CVBS OUT (A4)
Ⓕ TMS (A5)
Ⓕ TCK (A6)
Ⓕ TRAY CLOSE (A7)
Ⓕ TD1 (A8)
Ⓕ RESET (A9)
Ⓕ TRST (A10)
Ⓕ TD0 (A11)
Ⓕ A DIGITAL (A12)
Ⓕ C OUT (A13)
Ⓕ NFL OFF

L3011 10u
Q3010 2SC1959Y (REG.5V)
Q3011 2SC1959Y (REG.5V)
C3010 0.01
C3041 6V220
C3040 25V47
D3001 MA4056N-HTA
R3032 470

Q4002 2SC1959Y (REG.5V)
L4003 220u
K4008
C4007 0.01
R4002 1K
C4014 6V470
D4002 MA4056N-HTA
C4016 25V4.7

Q4001 2SA1515
C4008 0.01
R4003 4700
R4018 470
R4019 470
C4013 16V220
D4001 MA4091-TA
C4015 25V4.7
L4001 220u

C4033 0.1

Ⓕ A L OUT
Ⓕ A R OUT
R4012 0
R4013 0
Q4004 2SD601A (MUTE)
Q4005 2SD601A (MUTE)
C4029 1000P
C4028 1000P
R4031 100
R4032 100
R4015 220
R4014 220
R4017 47K
R4016 47K
C4017 16V47
C4018 16V47
C4019 100P

QR4004 UN2113 (MUTE)
QR4005 UN2211 (MUTE)
R4025 1K

Ⓕ UNREG 6V
Q6002 2SD601A (REG.6V)
C6021 0.01
R6036 330
C6023 16V10
D6002 MAZ4039OHF
C6022 16V10

QR4006 UN2211 (NFL OFF)
QR4001 UN2211 (MUTE)
K4001

Ⓕ NP OFF Ⓛ (B1)
Ⓕ UNREG -29V (B2)
Ⓕ HEATER (+) (B3)
Ⓕ HEATER (-) (B4)
Ⓕ NP MUTE

K3002 (A3)
L3003 22u
L3007 0
R3010 680
C3006 47P
C3007 47P
R3011 680

K3007 (A1)
L3010 22u
L3005 0
R3004 680
C3038 47P
C3002 47P
R3006 680

K3008 (A2)
L3001 22u
L3006 0
R3005 680
C3001 47P
C3003 47P
R3007 680

R3002 1200

Q3003 2SB709A (AMP)
L3009 22u
R3025 680
C3033 47P
R3026 8200
C4032 6V470
Q4003 2SD601A
R4027 1200
R4028 3900
C4011 0.1
C4012 6V220

R3027 J0JCC0000062

Q3004 2SB709A (AMP)
Q3006 2SD601A (AMP)
R3019 330
R3021 24K
C3031 0.1
C3032 6V220
L3008 10u
C4006 6V220
C3022 4V470
R3015 120
C3024 6V47
L3002 22u
R3014 10K
R3034 120
R3016 120
R3023 20K
R3008 680
C3004 47P
C3005 47P
R3009 680

Q3005 2SB709A (AMP)
Q3007 2SD601A (AMP)
R3020 330
R3022 68K
C3036 0.1
L3004 22u
R3017 120
R3018 120
C3035 0.1
R3024 47K
R3012 680
C3008 47P
C3009 47P
R3013 680
(A13)

K3001
C3042 47P
R3035 680

R4009 4700
R4021 2400
C4009 16V47
C4022 1000P
R4011 4700
C4020 100P
R4010 4700
R4020 2400
C4021 1000P
R4008 4700
C4010 16V47
C4023 16V10

R4029 1K
C4005 0.1
C4031 33P

IC4001 PCM1742KE (AUDIO DAC)
VOUTR VOUTL VCC VDD DGND LRCK DATA BCK
AGND VCOM ZEROR ZEROL MDI MC ML SCK

IC4002 NJM4558M-TI

IC1001 PQ07RX11 (REGULATOR)
V IN V ON/OFF VO V REF GND
D1006 11ES1TAI
R1003 1200
R1002 1200
R1001 100
C1001 6V220

IC1003 PQ09DZ1U (REGULATOR)
V IN V ON/OFF VO V REF GND

IC1002 PQ1K333M2ZP
VIN GND VCTL VO GND NRED
C1005 6V220
C1002 16V220
C1006 0.01

D1004 11ESITAI
D1005 11ESITAI

LB3013 J0JCC0000062
LB3001 ERJ3GEY0R00V
LB3002 ERJ3GEY0R00V
LB3003 ERJ3GEY0R00V
LB3004 ERJ3GEY0R00V
LB3005 ERJ3GEY0R00V
LB3006 ERJ3GEY0R00V
LB3008 ERJ3GEY0R00V
LB3009 J0JCC0000062
LB3010 J0JCC0000062
LB3011 J0JCC0000062
LB3012 J0JCC0000062

P30003 → TO AV DECODER P3703(G-1)

1	B
2	GND(V)
3	DSP CLK
4	STATUS
5	CMD
6	GND(D)
7	M +9V
8	GND(M)
9	D +5V
10	GND(D)
11	D +2.5V/5V
12	GND(D)
13	3.3/2.5/1.8V
14	GND(D)
15	A +5V
16	GND(A)
17	Y
18	GND(V)
19	C
20	CVBS
21	R
22	G

LB4009 J0JBC0000011
LB4001 220
LB4002 ERJ3GEY0R00V
LB4003 100
LB4004 ERJ3GEY0R00V
LB4005 220

P30004 → TO AV DECODER P3704(B-1)

1	A DIGITAL
2	GND(D)
3	TCK-JTAG
4	TRV-SW +/SW -
5	TCK-JTAG
6	/TRST-JTAG
7	TDO-JTAG
8	CNT/MDI
9	GND/MC
10	SW/ML
11	GND/SCLK
12	FL/BCLK
13	GND/SDATA
14	FR/LRCLK
15	AC3/DACMUT
16	GND(ADAC)
17	MIXL
18	GND(ADAC)
19	MIXR
20	/RESET
21	AMUT(H)
22	TMS-JTAG

K1001

P30001 → TO POWER P1103(E-10)

1	HE(+)
2	HE(-)
3	GND(D)
4	UNREG 4V
5	GND(D)
6	UNREG 6V
7	GND(A)
8	NOT USED
9	UNREG -29V
10	GND(M)
11	UNREG(9V)

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

REF.NO.30000 SERIES

NV-VHD1B/EC/EE/F

AUDIO DAC SECTION IN DVD INTERFACE SCHEMATIC DIAGRAM

VHS MAIN C.B.A.

AUDIO/VIDEO SECTION

IC3001

IC3501

YNR
HSS
1H DELAY
LPF
DDC
NOR
NC1
PICT
CLP1
NC2
DET
AGC
Y/C
C
EE
VV
EE/ FAMI
NLE NLDE
DTE
MAIN LPF
FAMI
SUB LPF
FM DEM
DOUB LIM
ENV DET
PEAKING
H-TRAP
Y/C MIX
REC-Y ADJ
LPF
Y
AGC DET
RF AGC
L-TRAP &HPF
W/D CLIP
DEV ADJ
FM MOD
MAIN EMPH
SUB CLAMP
ART SYNC
AMP
COLOUR KILLER SW
BURST UP/DOWN
FAMI/VV
BPF (FAMI)3.58M (PAL-PB)2.2M (NTSC-PB) 1.79M
BPF 3.58M/ 4.43M
VV/ FAMI
630KHz BPF
CACC
REC-C ADJ
CHROMA GAIN
P
S
BM-B (PB)2.2/1.79M→4.43/3.58M (FAMI)2.2M→4.43M
NTSC ALTERNATION
BM-A (REC)4.43/3.58M (PB)630K→2.2/1.79M (FAMI)3.58M→2.2M
2HDL 1HDL
0HDL
0HDL
ACC
ACC DET
IIC BUS TRANSCEIVER
PHASE ROTATION
2fsc
fsc
X2
VXO
1/2
1/4
1/4
SUB BM
F.DET
VCO
1/40
APC CK DET
AFC
SIDE LOCK
PB Q ADJ
FH
X3001
QR3502
QR3501
LP Ⓗ
PAL EP Ⓗ
TW3030
TW3001
TW2001
NV-VHD1F
Q3001
AMP
(A)
(B)
(C)
NV-VHD1 B/EC/EE
AMP & H.AMP SW
PREAMP & H.SW
H.AMP SW
PREAMP & H.SW
PREAMP & H.SW
LP L
LP COM
LP R
SP L
SP COM
SP R
P3502 3
P3502 2
P3502 1
P3502 6
P3502 5
P3502 4
TO/FROM CYLINDER VIDEO HEAD
HEAD SW
H.AMP SW
CURR.EMPH Ⓗ
D.REC Ⓗ
LP Ⓗ
TRACKING ENV.
ENV.SELECT.
TO/FROM SYSTEM CONTROL
FSC
ROTARY SW
F.ADJ.
TO/FROM SYSTEM CONTROL

FAMI MODE:When setting the NTSC CONVERTER to ON on the OSD Screen Display, the signals from NTSC Signal Source (ex.NTSC GAME Machine)connected to the VCR can be appeared on the PAL TV.However when recording, it is not recorded correctly.

NV-VHD1B/EC/EE/F
VCR LUMINANCE & CHROMINANCE BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

VHS MAIN C.B.A.

I/O SECTION

AUDIO/VIDEO SECTION

TUN V IN

VIDEO FROM YC

TO/FROM SYSTEM CONTROL

VIDEO FROM YC

V OUT TO I/O

AV1 PB Ⓗ

Q4904

AMP

IC4901

CLAMP

TU7601

TUNER

VIDEO OUT

C SYNC

ART V/H/N + NAVI

IIC CLK S

IIC DATA S

JK4902 AV1 (TV)

PB +12V

BLUE

GREEN

RED

BLANKING

VIDEO OUT

VIDEO IN

PS 12V

Q4901

TW3003

TW3002

V OUT TO YC

AV2 (DECODER /EXT)

Q4903

PB Ⓗ

NV-VHD1F ONLY

V.EE Ⓛ

VIDEO 5V

QR5502

Q5503

IC5501

FREQUENCY ADJ.(4.3MHz)

Q5504

SYNC GATE GEN V-SEP

CTL

EE

VV

MUTE

Q5502

BUFFER

4.3MHz BPF

QR5501

SECAM Ⓛ

FREQUENCY ADJ.(1.1MHz)

Q5505

SG

LIM

1/4

X2

2.2MHz BPF

SECAM REC C

VR5501

1.1MHz BPF

AGC AMP

A

B

C

I/O

IC4904

IC4903

IC4902

B OUT

G OUT

R OUT

C VBS OUT

FROM DVD BLOCK DIAGRAM

P30002 7 — P4301 7

P30002 8 — P4301 8

P30002 9 — P4301 9

P30002 12 — P4301 12

QR4903

PS5V

RGB OFF Ⓗ

TU7601

TUNER (RF CONVERTER SECTION)

DVD INTERFACE

PS12V

PS5V

SYS5V

QR4902

TO VCR AUDIO

TO VCR AUDIO (TO QR4509- Ⓔ)

TO/FROM SYSTEM CONTROL

DVD Ⓗ

SUB W MUTE

OSD IIC DATA

OSD IIC CLOCK

DVD Ⓛ

SW MUTE Ⓗ

IIC BUS INTERFACE

NV-VHD1B/EC/EE/F
VCR LUMINANCE & CHROMINANCE BLOCK DIAGRAM

SYSTEM CONTRL & SERVO SECTION

IC0201 (CAPSTAN MOTOR DRIVE)
CAPSTAN MOTOR L0201
TL0201
MOTOR DRIVE
DIFFERENTIAL AMPRIFIER
TORQUE CONTROL
TL AMP
EC AMP
POSITION SIGNAL PROCESS
TORQUE DIRECTION
CONTROL LOGIC
H1
H2
H3
LOADING MOTOR
P1501 1
P1501 2
P2501 P0201 9
P2501 P0201 8
P0201 P2501 1
P0201 P2501 2
P0201 P2501 3
P0201 P2501 12
P0201 P2501 11
P0201 P2501 4
UNREG 14V
R0206 CAPSTAN FG HEAD
CAP FG5V
TW2015
TW2002
TL2503
TL2502

INPUT		OUTPUT		MODE
PIN 15	PIN 16	PIN 19	PIN 21	
H	L	H	L	FORWARD
L	H	L	H	REWIND
H	H	L	L	BRAKE
L	L	OPEN	OPEN	STOP

IC6001 (SYSTEM CONTROL/SERVO IC)
1 CURRENT LIMIT
79 CAPSTAN ERROR TORQUE
83 CAPSTAN REVERSE/ FORWARD
67 LOADING Ⓗ
66 UNLOADING Ⓗ
104 CAPSTAN FG IN
103 CAPSTAN FG OUT
114 CTL OUT
69 EX.FF/REW Ⓛ
20MHz IN 31
20MHz OUT 32
32KHz IN 34
32KHz OUT 35
X6002
X6001
FIP Ⓛ 48
5V D 33
P.FAIL Ⓛ 76
RESET Ⓛ 52
S.DATA IN 90
S.DATA OUT 91
S.CLOCK 89
FIP CS 92
IR 77
POWER SW 43
QR1001
IC7504
RESET
SYS 5V
BACK UP C7507
IR7551
IR RECEIVER
5V(AD)
IC7503
RESET
SYS 5V

DP7501
TIMER DISPLAY
F+ F+ F- F-
1 2 44 45 39 33 23 5
Q1002 BUFFER
FROM POWER
HEATER(+)(SWD)
HEATER(-)(SWD)
UNREG -29V(SWD)
Q1006

IC7501
36 SEG1
20 SEG17
18 SEG18
11 GRID1
17 GRID7
19 VEE
1 SERIAL DATA
2 SERIAL CLOCK
3 CS
4 AN3
5 AN2
6 AN1
7 AN0

S1501 MODE SW
45 POSITION SW2
44 POSITION SW3
46 POSITION SW1

CYLINDER STATOR UNIT
P2901
MAIN COIL 2
MAIN COIL 1
MAIN COIL 3
HALL IC

6,7	COM	P2502-3,4
1	M2	P2502-9
9	M1	P2502-1
3	M3	P2502-7
5	GND	P2502-5
8	HE-	P2502-2
4	HE+	P2502-6
2	VH+	P2502-8

IC2501 (CYLINDER MOTOR DRIVE)
MOTOR DRIVE
PG/FG
DIFFERENTIAL AMPLIFIER
SCHMIT
TORQUE CONTROL
POWER SAVE
REG 5V
UNREG 14V
IC6002
80 CYLINDER ERROR TORQUE
107 CYL PFG

N.SW 5V
14 TAKE-UP PHOTO
13 SUPPLY PHOTO
65 SAFETY TAB Ⓛ
REG 5V
IC1501 (T-REEL SENSOR)
IC1502 (S-REEL SENSOR)
TL6013
TL6012
94 S-REEL PULSE
93 T-REEL PULSE
Q1501 TAKE UP PHOTO SENSOR
D1501 SENSOR LED
Q1502 SUPPLY PHOTO SENSOR
S7507 SAFETY TAB SW

CTL HEAD
P4003 5
P4003 6
111 CTL HEAD(-)
112 CTL HEAD(+)

SYS 5V
POWER S4832

REC S4834
EXT LINK S4837
CH-UP S4833
T.REC S4836
CH-DN S4835
INT TIMER S4831
T.EJECT S7552
REW S7568
T.PLAY S7551
REC-MONITOR S7565
FF S7564
T.STOP S7562
KEY2
KEY1
KEY0

NV-VHD1B/EC/EE/F
VCR SYSTEM CONTROL & SERVO BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

IC4501

AV1 R IN

AV2 R IN

AV1 L IN

AV2 L IN

AV2 R OUT

AV2 R IN

AV2 L OUT

AV2 L IN

QR4503 MUTE

QR4504 MUTE

SWITCH RCH

SWITCH LCH

INPUT SELECT SWITCH RCH

INPUT SELECT SWITCH LCH

OUTPUT SELECT SWITCH RCH

OUTPUT SELECT SWITCH LCH

PNR RCH

PNR LCH

AGC & SWITCH

FM MODULATOR/ DEMODULATOR

LPF

BPF

BPF

AGC

LPF

FM MODULATOR/ DEMODULATOR

AGC & SWITCH

IIC BUS INTERFACE

IIC CLK S

IIC DATA S

TO/FROM SYSTEM CONTROL

VCO F0

FSC

FROM LUMINANCE & CHROMINANCE

AUDIO H.SW

FROM SYSTEM CONTROL

PB60Hz Ⓗ

QR4507

PREAMP & SWITCH

TW4501

P3502 8

P3502 9

P3502 10

L

R

Hi-Fi AUDIO HEAD

IC3001

SW GAIN

A.HEAD(W)

A.HEAD(R)

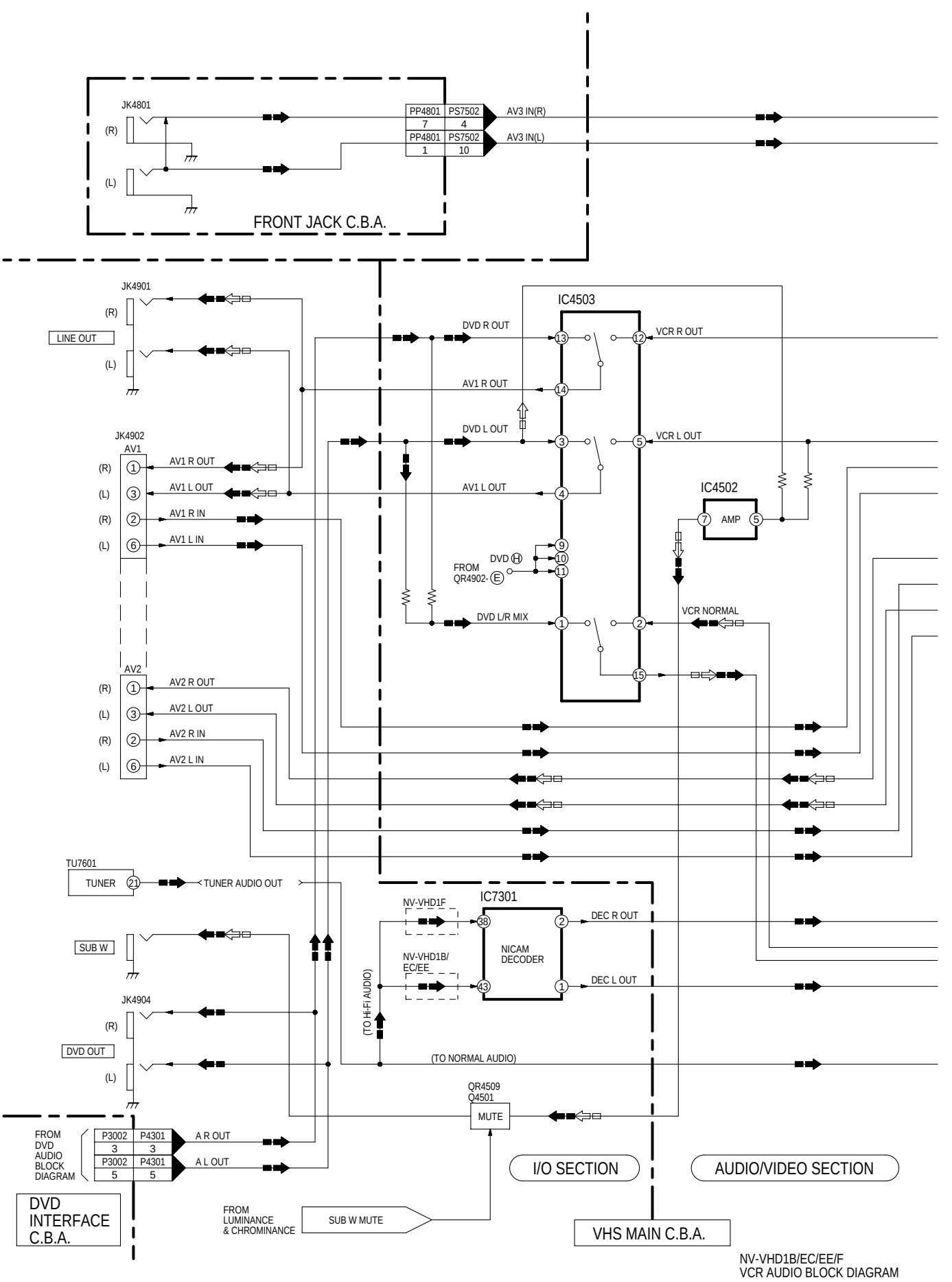
ALC

NORMAL SELECT SWITCH

TO/FROM AC HEAD

NV-VHD1B/EC/EE/F
VCR AUDIO BLOCK DIAGRAM

NV-VHD1B/EC/EE/F
VCR AUDIO BLOCK DIAGRAM



NV-VHD1B/EC/EE/F
VCR AUDIO BLOCK DIAGRAM

DVD INTERFACE C.B.A.

IR7551
IR RECEIVER
1

OPEN/CLOSE
S6181

D.PLAY
S6162

D.STOP
S6163

PP7552 PS31005
1 1 — IR
3 3 — PA2
5 5 — PA0

IC36001
(SUB CPU)
33 REMOCON
18 PA2
16 PA0

PP7551 PS7501
2 2

X36001
1 — 9 OSC2
3 — 10 OSC1

POWER SUPPLY C.B.A.

VHS MAIN C.B.A.

I/O SECTION

AC SOCKET
P1101

F1101

SURGE KILLER

L1120
L1121
LINE FILTER

D1140
C1141
RECTIFIER

POWER TRANSFORMER
T1150

IC6001
77 IR
P.FAIL (L) 76

P4301 P30002
2 2 — PFAIL (L) — 26 RESET
40 NP PFF (L)
P MUTE 50

FL(DP37501)

DGT13 51
DGT1 63
GRID CONTROL SIGNAL
54 F+
51 G1
38 G13

SEG7 64
SEG23 80
SEGMENT CONTROL SIGNAL
20 P16
5 P1

Q36003
SW

1 F-

SYSTEM CONTROL & SERVO SECTION

20 <UNREG 36V> P1102 5,6 P1001 5,6
19 <UNREG 14V> P1102 2 P1001 2
14 <UNREG -29V(SWD)> P1102 11 P1001 11
12 <H- (SWD)> P1102 10 P1001 10
11 <H+ (SWD)> P1102 8 P1001 8

18 <UNREG 9V> P1103 11 P30001 11
17 <UNREG 6V> P1103 6 P30001 6
16 <UNREG 4V> P1103 4 P30001 4
13 <HE(+)> P1103 1 P30001 1
<HE(-)> P1103 2 P30001 2

Q1150,1151,1152,1153
LR1150
CONSTANT VOLTAGE CONTROL
5
6
7

IP1240
IC PROTECTOR 50V/0.25A

Q1200
PHOTO COUPLER

IC1200
1 SHUNT REG. 2

IC31003
1 MOTOR 9V REG 3
2

IC31002
1 V CONTROL 6
3
V ON/OFF

IC31001
1 D2.5V 3
2

UNREG 6V

Q33011
A5V

Q33010
D5V

Q36002
3.5V → 3.5V

Q34002
5V REG.

Q34003
+3.3V REG.

IC34003
5 VDD
6 VCC

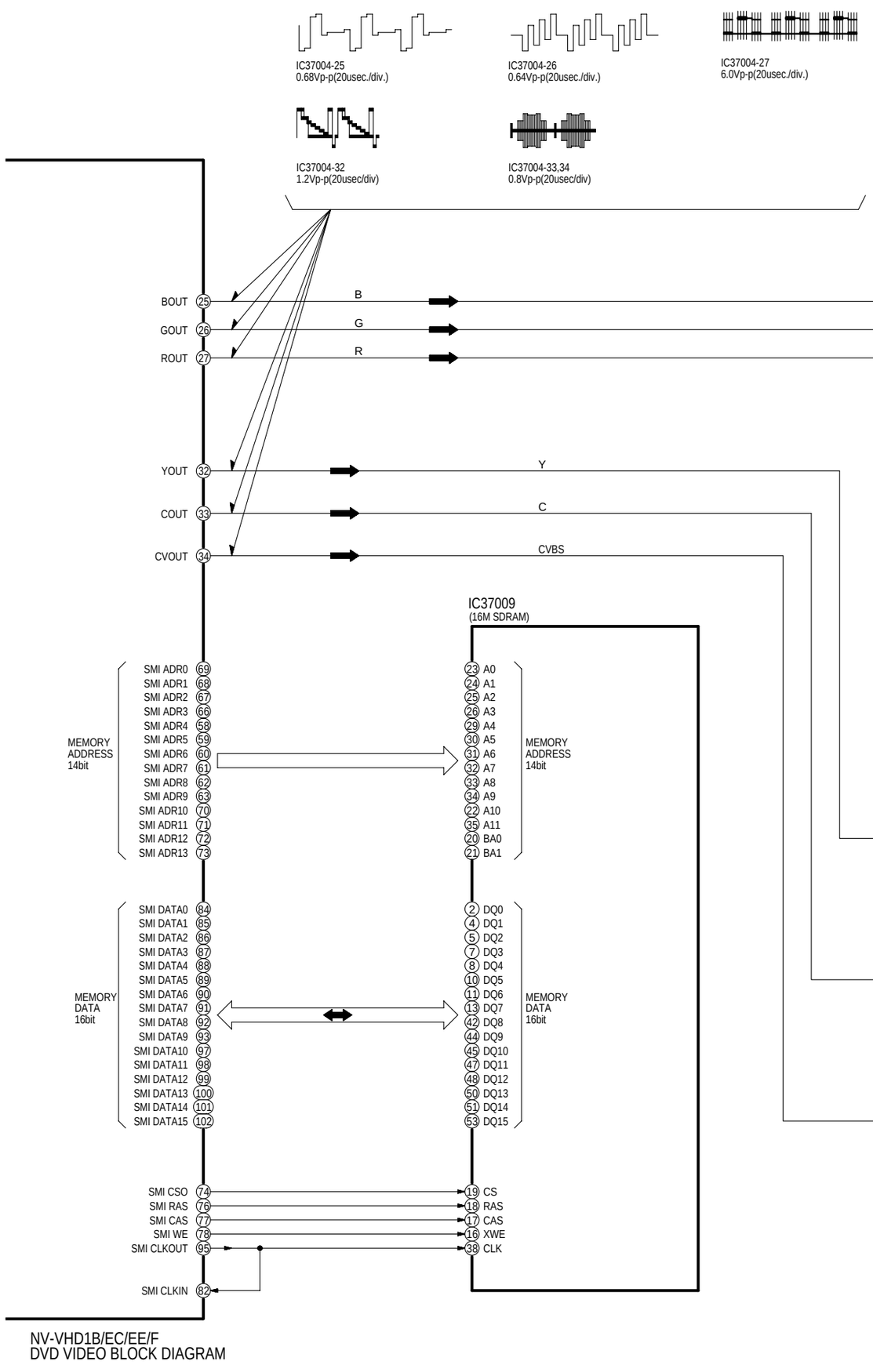
M+9V — P30003 7 P37003 7
A+5V — P30003 15 P37003 15
D+5V — P30003 9 P37003 9
3.3V — P30003 13 P37003 13
P30003 11 P37003 11

DVD UNIT

PRIMARY
SECONDARY

DVD INTERFACE C.B.A.

NV-VHD1B/EC/EE/F
POWER SUPPLY BLOCK DIAGRAM



NV-VHD1B/EC/EE/F
DVD VIDEO BLOCK DIAGRAM

MAIN SIGNAL

DVD INTERFACE C.B.A.

VHS MAIN C.B.A.

I/O SECTION

P37003	P30003
1	1
22	22
21	21
17	17
19	19
20	20

B OUT
G OUT
R OUT
Y OUT
C OUT
CVBS OUT

P30002	P4301
7	7
8	8
9	9
10	10
11	11
12	12

TO
LUMINANCE & CHROMINANCE
BLOCK DIAGRAM(1/2)

Q33006,Q33004
Q33007,Q33005
Q33003
AMP

JK4903
4 3
2 1
5

(TO IC4901- 11 , 23)
TO
LUMINANCE & CHROMINANCE
BLOCK DIAGRAM

NV-VHD1B/EC/EE/F
DVD VIDEO BLOCK DIAGRAM

FEP TERMINAL C.B.A.

AV DECODER C.B.A.

OPTICAL PICK UP UNIT

IC5201
(FEP)

43 VIN1
44 VIN2
45 VIN3
46 VIN4
38 VIN5
39 VIN6
40 VIN7
41 VIN8
47 VIN9
48 VIN10
VREF
VREF
RF ENV 36
HOLD
RFIN P/N
DCRF

P37001
27

IC37003
(NODC)

35 RF ENV
DD0 104
103
102
101
100
97
96
DD7 95
81 CPUDT0
74 CPUDT7
DATA
NWR 73
NRD 72
ADDRESS
CPU A0 → CPU A17
70 – 53

IC37004
(AV DECORDER)

6 DD0
7 DD1
8 DD2
9 DD3
10 DD4
11 DD5
12 DD6
13 DD7

IC37001
(8M FLASH ROM)

29 DQ0
36
38
45 DQ14
DATA
ADDRESS
A0 25
18
8
1
48 A18
CPUA1-18
129 CPUA0
161
170
173
183 CPUA21
ADDRESS
28
11
12
26
FLASH RST(L)
TP37028
124 RESET
132
TP37001
IC37011
4
RESET
117 CPUOE
128 NWEL
141 CPU DATA0
148
151
158 CPU DATA15
DATA

NV-VHD1B/EC/EE/F
DVD VIDEO BLOCK DIAGRAM

AV DECODER C.B.A.

DVD UNIT

RF SIGNAL

MOTOR DRIVE SIGNAL

TRACKING ERROR SIGNAL

FOCUS ERROR SIGNAL

IC2501
(MOTOR DRIVE)

9 — P37001 20 / FP5202 20 — 26 TRIN
7 — P37001 16 / FP5202 16 — 2 VIN1
5 — P37001 15 / FP5202 15 — 3 VIN2
11 — P37001 17 / FP5202 17 — 23 VIN3
33 — P37001 14 / FP5202 14 — 6 OPOUT
FROM IC6001-27,28PIN — 24 LDIN
BIAS1
BIAS2

8 — P37001 21 / FP5202 21 — 27 CH3 MUTE
6 — P37001 12 / FP5202 12 — 9 CH1,2 MUTE

IC37004
(AVDEC)
201, 204, 207, 208
P37001 22 / FP5202 22 — 28 LD CNT — CNT
P37001 13 / FP5202 13 — 20 MUTE4 — CH4 MUTE
P37001 23 / FP5202 23 — SW2501 IN SW
P37004 4 / P30004 4 / P30005 1 — FROM TRAY SW

IC37002
(4M SDRAM)
2 DQ0
5
7
10
35
38
40
43 DQ15
DRAMD: 144, 131, 128, 127
18 A0
21
24
28 A8
DRAMA: 119, 111

LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT

VO4+ 15
VO4- 16
M2502 TRAVERS MOTOR
OPIN+ 4
VO3+ 17
VO3- 18
M2501 SPINDLE MOTOR
OPIN- 5

IC2511-11,12,13,14
7.2Vp-p(20usec./div.)

OPTICAL PICK UP UNIT
ACTUATOR
TRACKING COIL
FOCUS COIL
VO1+ 14 — ACT T+
VO1- 13 — ACT T-
VO2+ 12 — ACT F+
VO2- 11 — ACT F-

NV-VHD1B/EC/EE/F
DVD SERVO BLOCK DIAGRAM

NV-VHD1B/EC/EE/F
DVD SERVO BLOCK DIAGRAM

DVD UNIT

AV DECODER C.B.A.

IC5201 (FEP)

IC37003 (NODC)

OPTICAL PICK UP UNIT

PHOTO DETECTOR

B1 B2 A1 A2 A4 A3 B4 B3

HEAD AMP

VIN7 40
VIN8 41
VIN1 43
VIN2 44
VIN3 45
VIN4 46
VIN5 38
VIN6 39
VIN9 47
VIN10 48

AMP
EQ
HPF COMP.
DEFFERENTIAL PHASE DET.
FBAL
TBAL
VREF

PEAK
HOLD

RFENV 36 — FP5202 27 — P37001 27 — 35
TE 13 — FP5202 37 — P37001 37 — 31
TBAL 7 — FP5202 45 — P37001 45 — 4
FE 20 — FP5202 36 — P37001 36 — 30
FBAL 6 — FP5202 46 — P37001 46 — 1

RSCL — S LINE

LASER DIODE
Q5211
LD DRIVE
Q5215
LPC AMP

BDO 16 — FP5202 39 — P37001 39 — 17
OFTR 15 — FP5202 40 — P37001 40 — 16
FS 21 — FP5202 35 — P37001 35 — 33
ARF 26 — FP5202 30 — P37001 30 — 47
NARF 27 — FP5202 29 — P37001 29 — 49

RFINP 32
RFINN 33
TESTSG
DCRF

DPDOFT DET.
POFLT
LEVEL CONT.

ENV DET.
CSAG
DCAGC

AGC CONT.
BDOSL
AGCG

MIRROR DET.
BDO DET.
FC CONT.
BOOST CONT.
EQ
VGA
GD CONT.

SCK 10
SEN 9
STDI0 11
S-IF
REG

FP5202 41 — P37001 41 — 21
FP5202 43 — P37001 43 — 18
FP5202 42 — P37001 42 — 20

NV-VHD1B/EC/EE/F
DVD SERVO BLOCK DIAGRAM

DVD MECHANISM UNIT

FEP TERMINAL C.B.A.

AV DECODER C.B.A.

OPTICAL PICK UP UNIT

IC5201
FRONT END PROCESSOR (FEP)

IC37003
OPTICAL DISC CONTROLLER (NODC)

IC37004
AV DECODER (AV DEC)

IC34001
AUDIO D/A CONVERTER

AL

AR

SPINDLE MOTOR

TRAVERSE MOTOR

IC2501
MOTOR DRIVE

R

G

B

Y

C

CVBS

TO VCR SECTION

IC37001
8Mbit FLASH ROM

IC37002
4Mbit SDRAM

IC36001
SUB CPU

FL

OSD

LED

REMOTE CTL

KEY

TRAY

OPT

IC37009
64Mbit SDRAM

DVD INTERFACE C.B.A.

NV-VHD1B/EC/EE/F
DVD OVERALL BLOCK DIAGRAM

AV DECODER C.B.A.

DVD INTERFACE C.B.A.

MAIN SIGNAL

MAIN C.B.A.

I/O

IC37004
(AV DECODER)

IC34001
(AUDIO D/A CONVERTER)

DAC BCLK 51 — BCLK — P37004 12 / P30004 12 — BCK 1
DAC LRCK 56 — LRCL — P37004 14 / P30004 14 — LRCK 3
DAC PCM OUTO 52 — SDATA — P37004 13 / P30004 13 — DATA 2
PIO 0/4 190 — ML — P37004 10 / P30004 10 — ML 15
PIO 0/6 192 — MC — P37004 9 / P30004 9 — MC 14
PIO 0/5 191 — MDI — P37004 8 / P30004 8 — MDI 13
DAC SCLK 55 — SCLK — P37004 11 / P30004 11 — SCK 16

AUDIO SERIAL PORT
SERIAL CONTROL PORT
OVERSAMPLING DIGITAL FILTER WITH FUNCTION CONTROLLER
ENHANCED MULTI-LEVEL DELTA-SIGMA MODULATOR
DAC
DAC
OUTPUT AMP AND LOW-PASS FILTER
OUTPUT AMP AND LOW-PASS FILTER
SYSTEM CLOCK
SYSTEM CLOCK MANAGER
ZERO DETECT

7 V OUT L — A LOUT — P30002 5 / P4301 5
8 V OUT R — A ROUT — P30002 3 / P4301 3

TO VCR AUDIO BLOCK DIAGRAM

PIO 0/3 189 — AMUT (H) — P37004 21 / P30004 21

QR34001,QR34004
QR34005,QR34006

AUDIO MUTE CIRCUIT

IC34001-25

Q34004 MUTE

Q34005 MUTE

SDIF OUT1 57 — A.DIGITAL — P37004 1 / P30004 1 — P30002 19 / P4301 19

IC4905

GND 1
VCC 2
VIN 3

DIGITAL AUDIO OUT OPTICAL

NV-VHD1B/EC/EE/F
DVD AUDIO BLOCK DIAGRAM

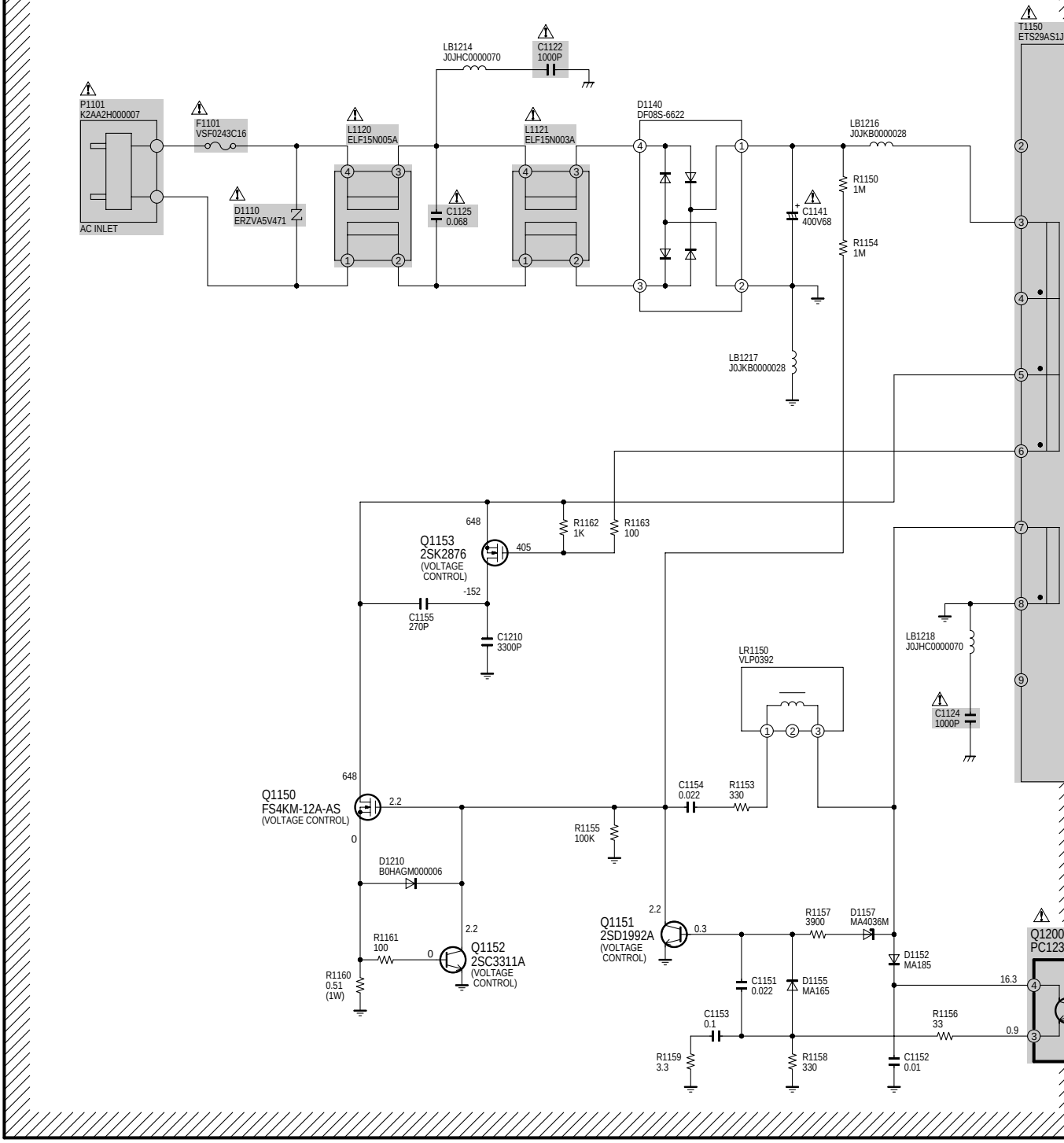
15 SCHEMATIC DIAGRAMS

15.1. POWER SCHEMATIC DIAGRAM

CAUTION

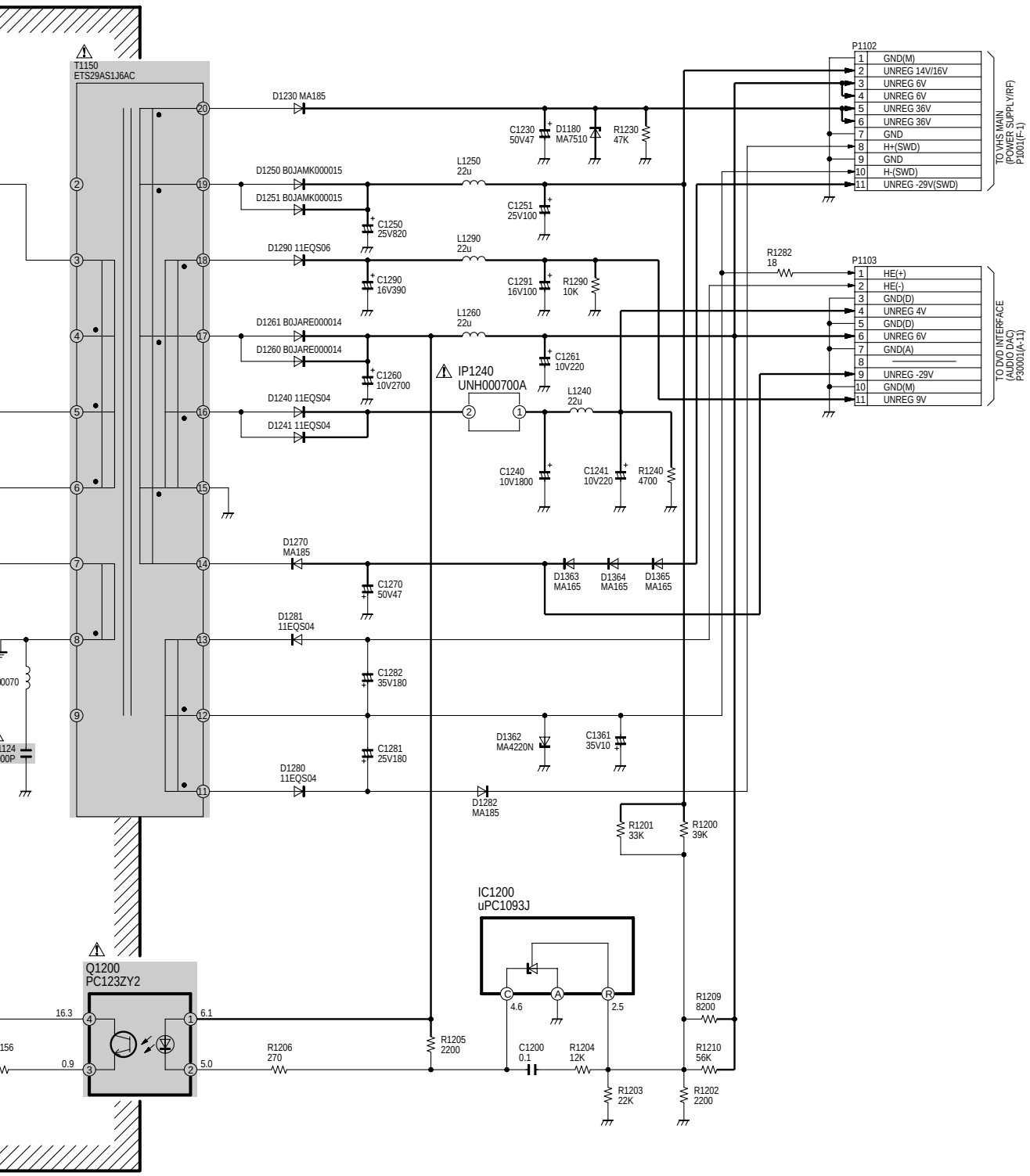
THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

HOT



NOTE1:WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POW
CIRCUIT,SET THE GND TERMINAL OF MEASURING POINT AS F
PRIMARY SIDE..... ⏚
SECONDARY SIDE... ⏚
NOTE2:THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN TH
INPUT AC IS 240V.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIALCHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,USE ONLY THE SAME TYPE.



AVEFORM ON THE POWER TRANSFORMER
EASURING POINT AS FOLLOWS.

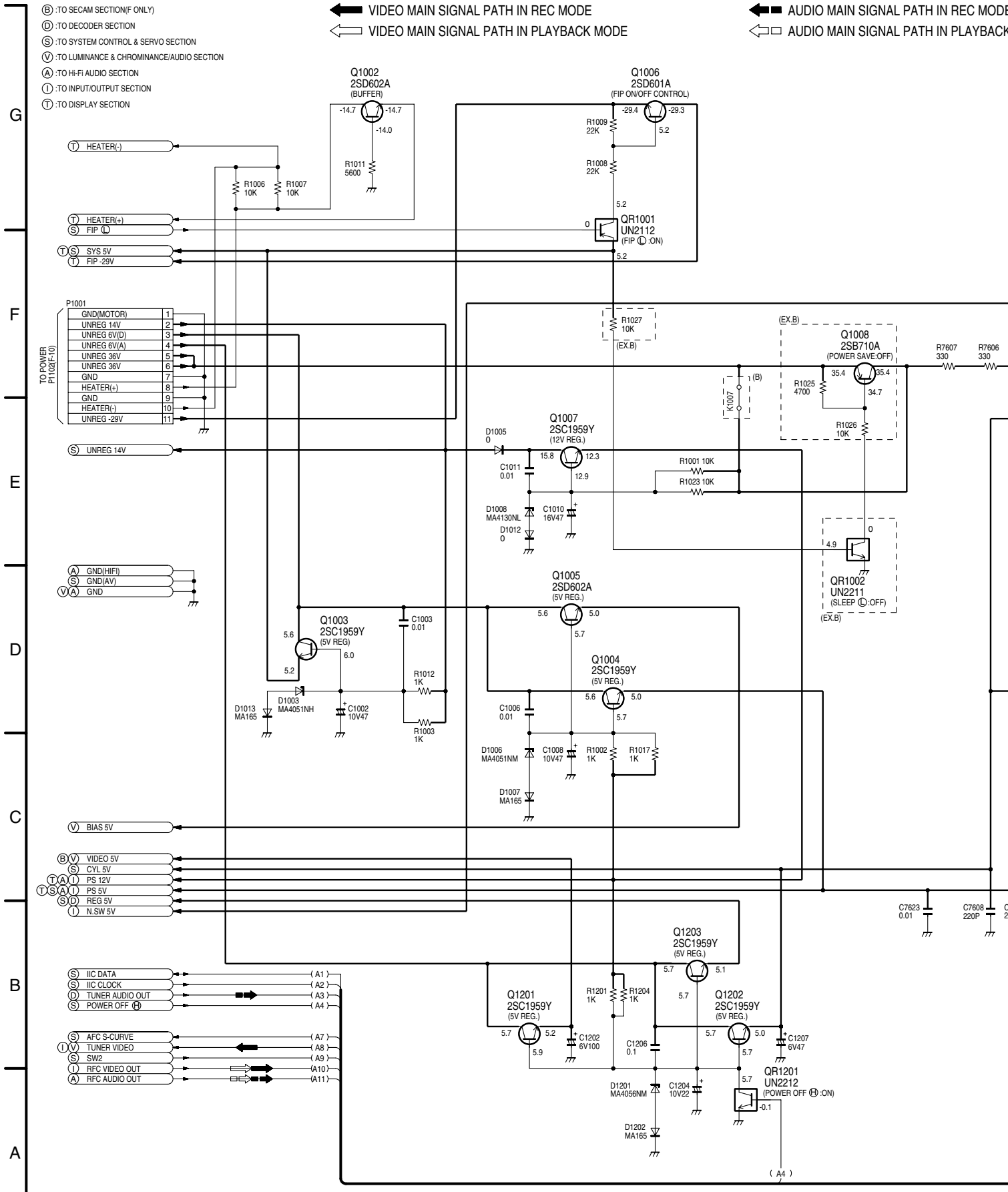
ARY SIDE IS SHOWN THE VOLTAGE WHEN

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NOTE:THE MEASURMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-VHD1B/EC/EE/F
POWER SCHEMATIC DIAGRAM

6 7 8 9 10

15.2. POWER SUPPLY/RF SECTION IN MAIN SCHEMATIC DIAGRAM



PATH IN REC MODE

PATH IN PLAYBACK MODE

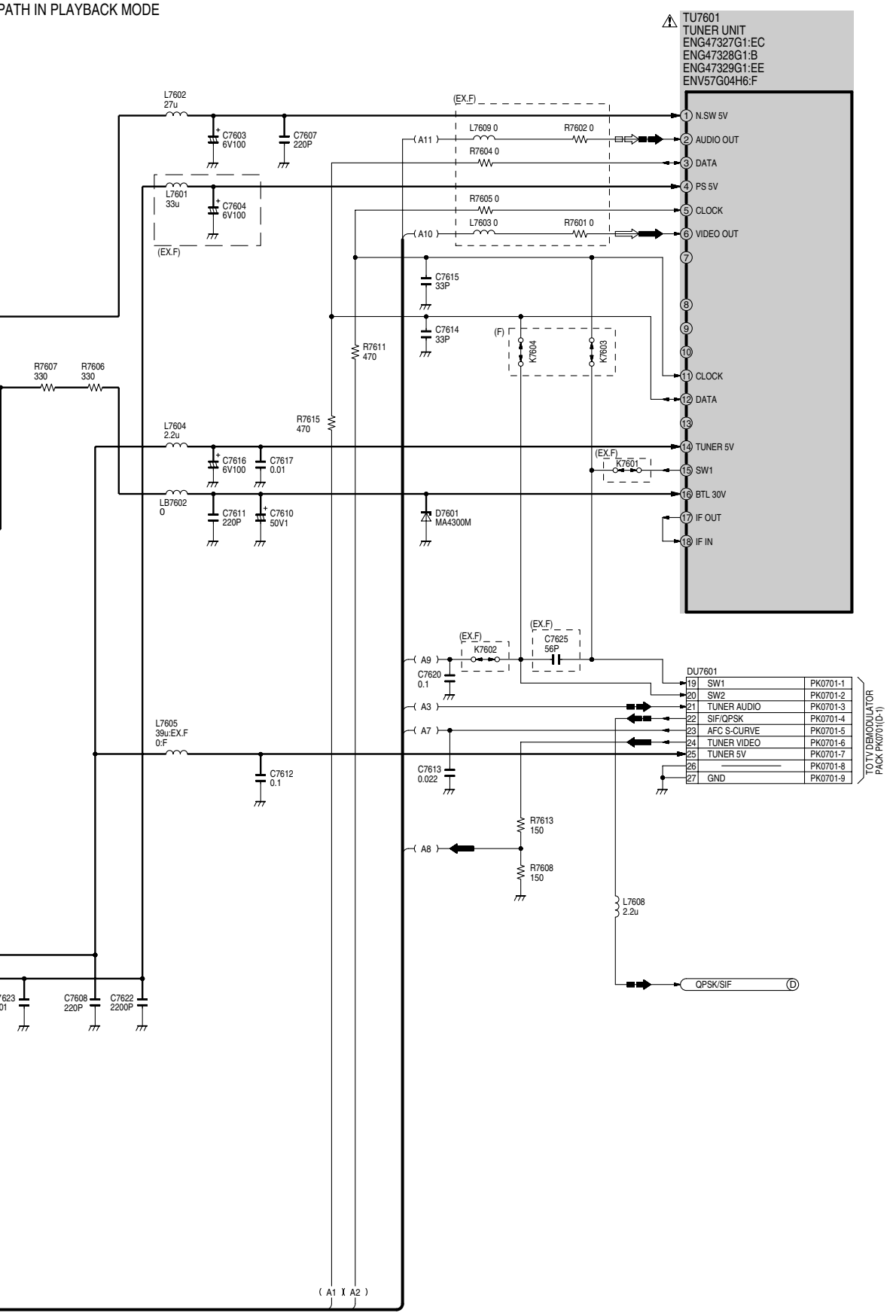


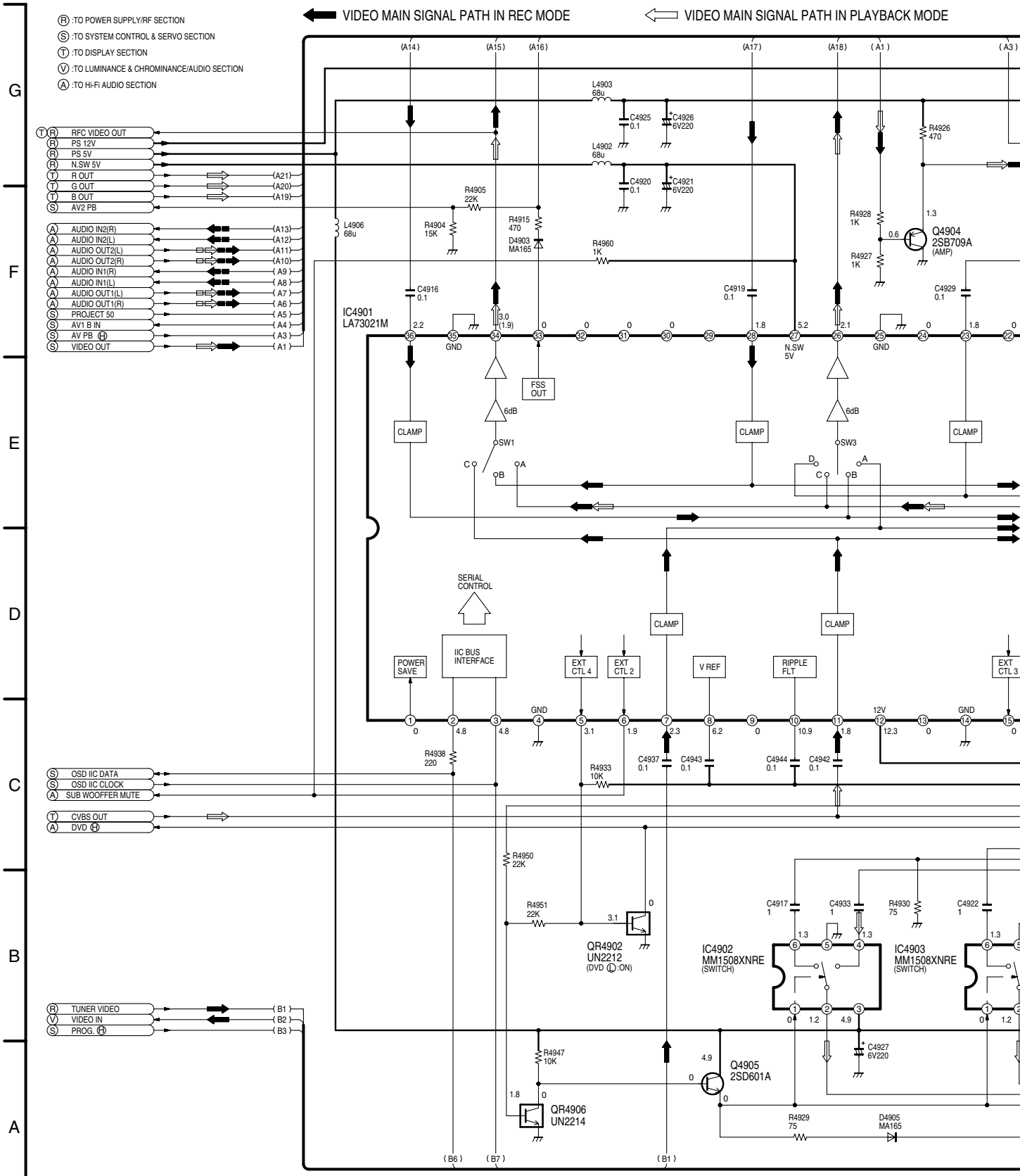
DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
POWER SUPPLY/RF
SECTION IN MAIN SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10

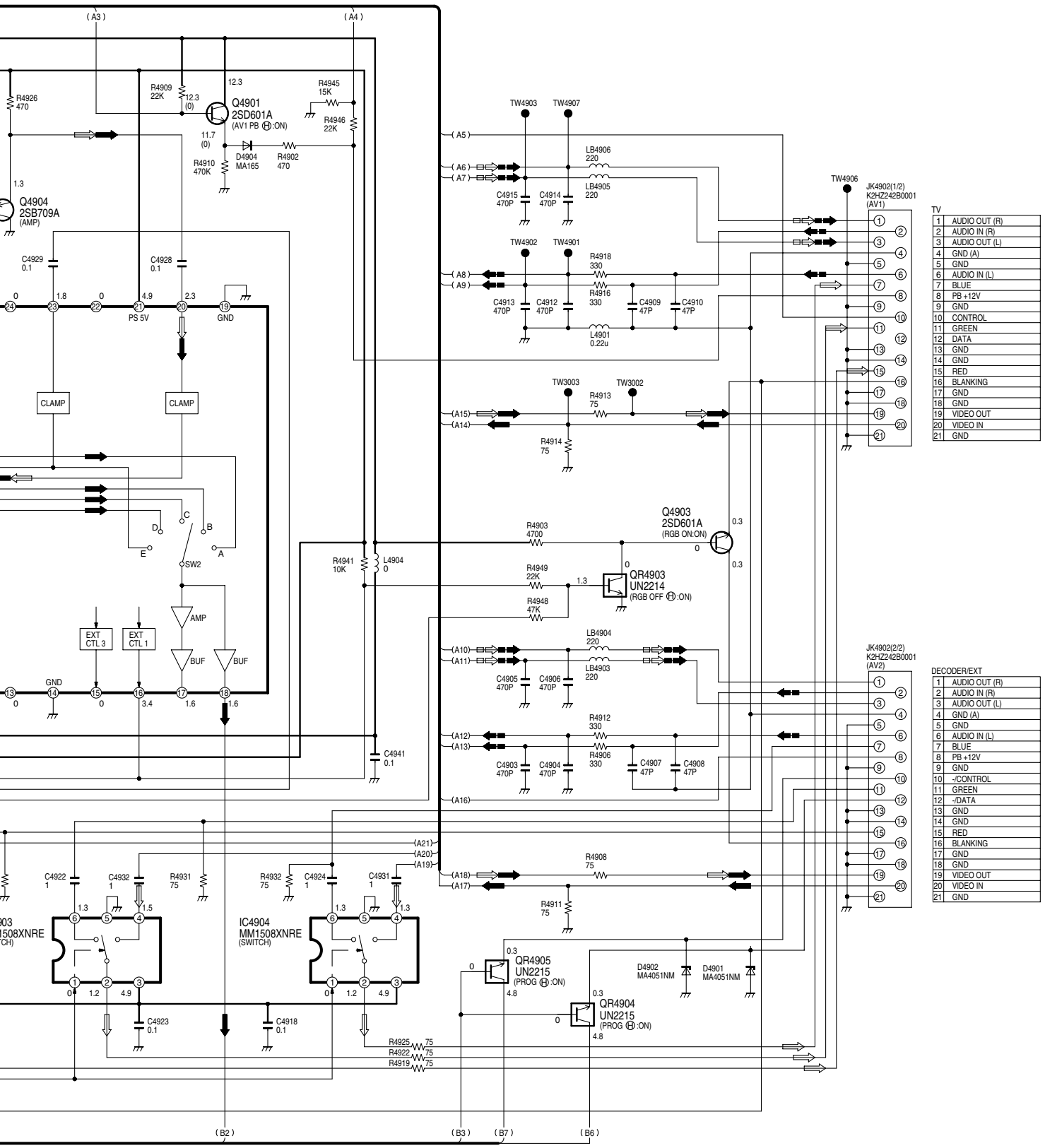
15.3. INPUT/OUTPUT SECTION IN MAIN SCHEMATIC DIAGRAM



MODE

AUDIO MAIN SIGNAL PATH IN REC MODE

AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



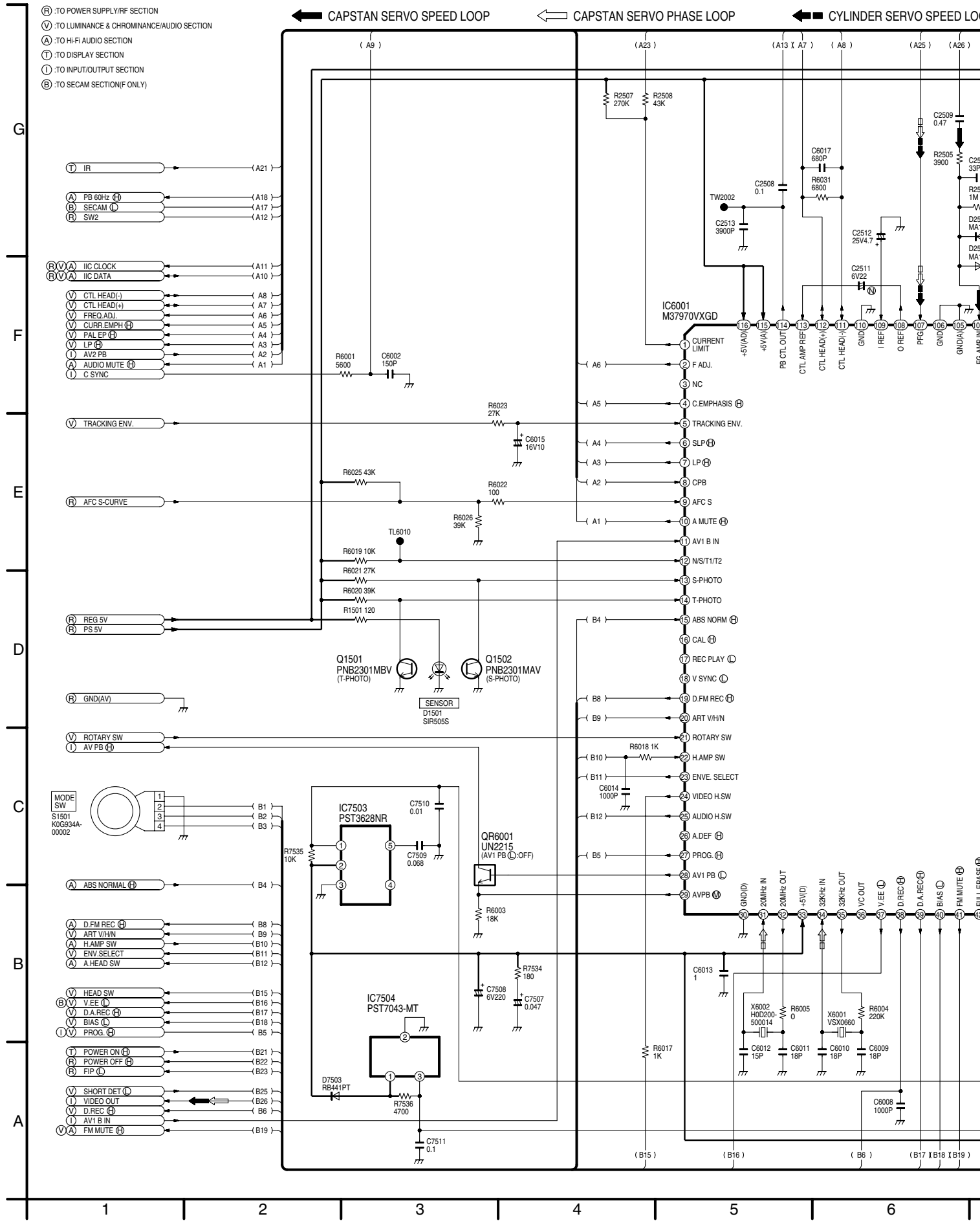
BRACKETS ON THIS MODE)

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER APART,PLEASE REFER TO PARTS LIST.

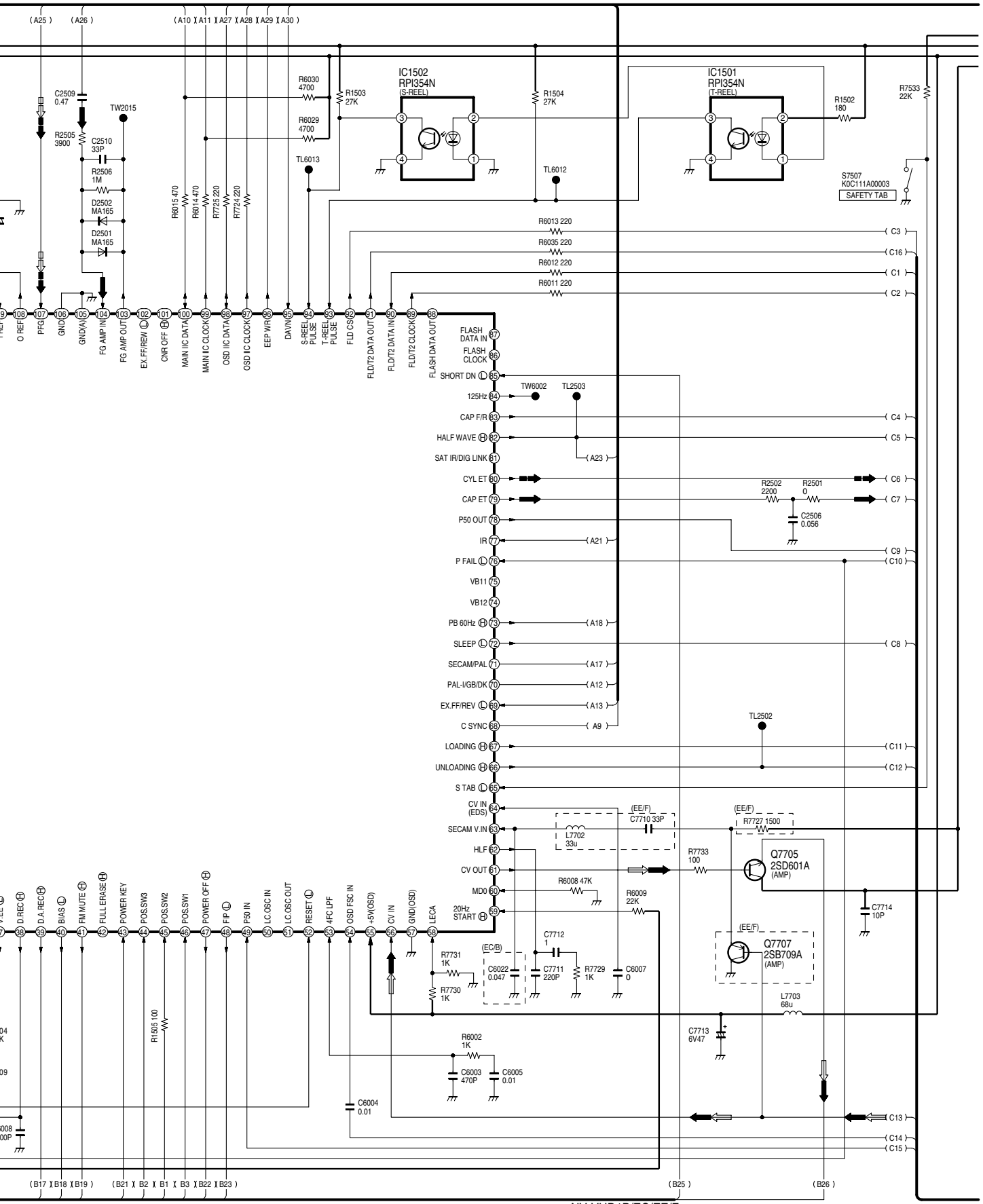
NV-VHD1B/EC/EE/F
INPUT/OUTPUT SECTION IN MAIN SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10 | 11

15.4. SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

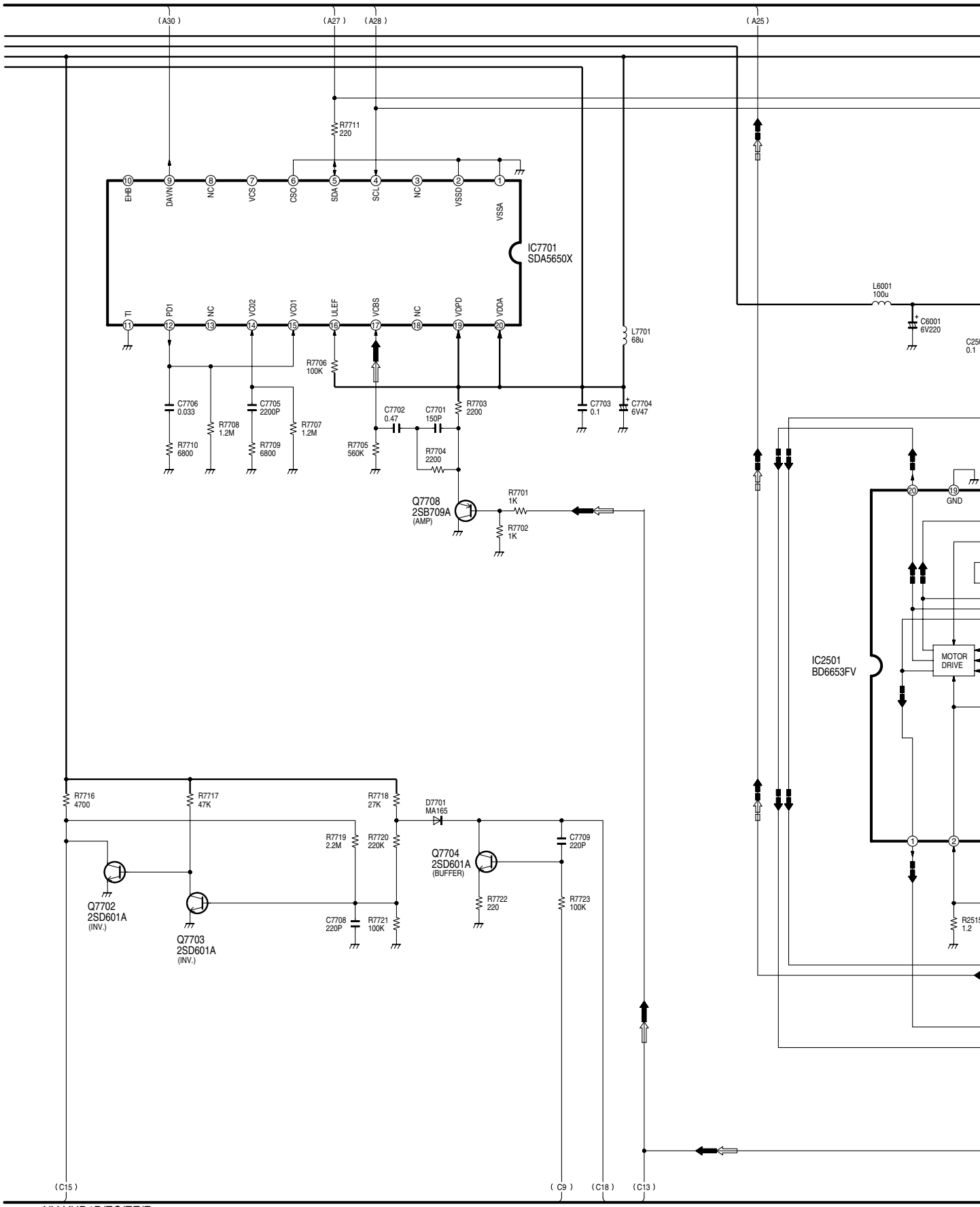


SERVO SPEED LOOP ⇦□ CYLINDER SERVO PHASE LOOP



NV-VHD1B/EC/EE/F
SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

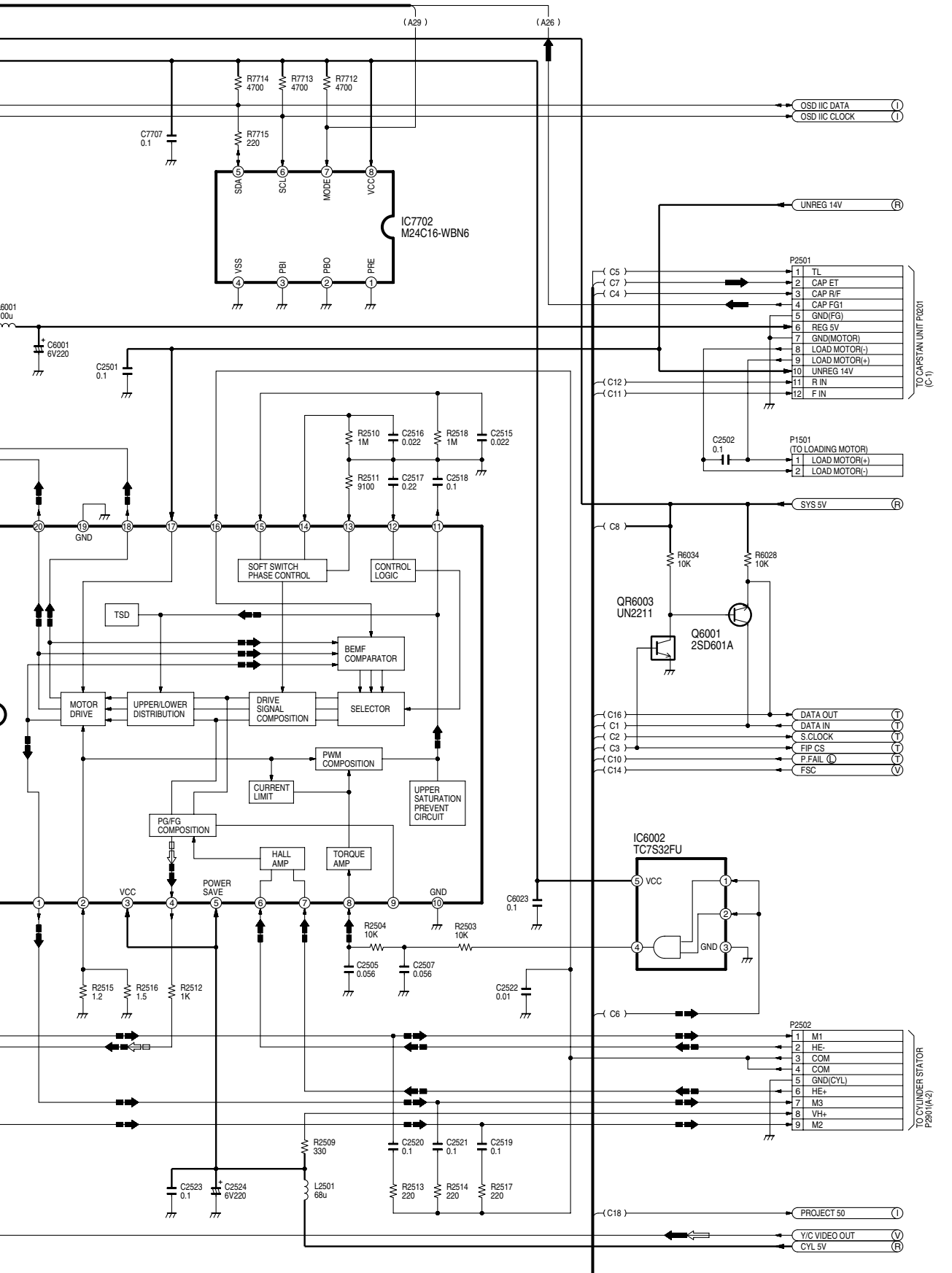
6 | 7 | 8 | 9 | 10 | 11 | 12



NV-VHD1B/EC/EE/F
SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

NOTE:DO NOT USE ANY PART
ORDERING.WHEN YOU ORD

12 | 13 | 14 | 15 | 16 | 17

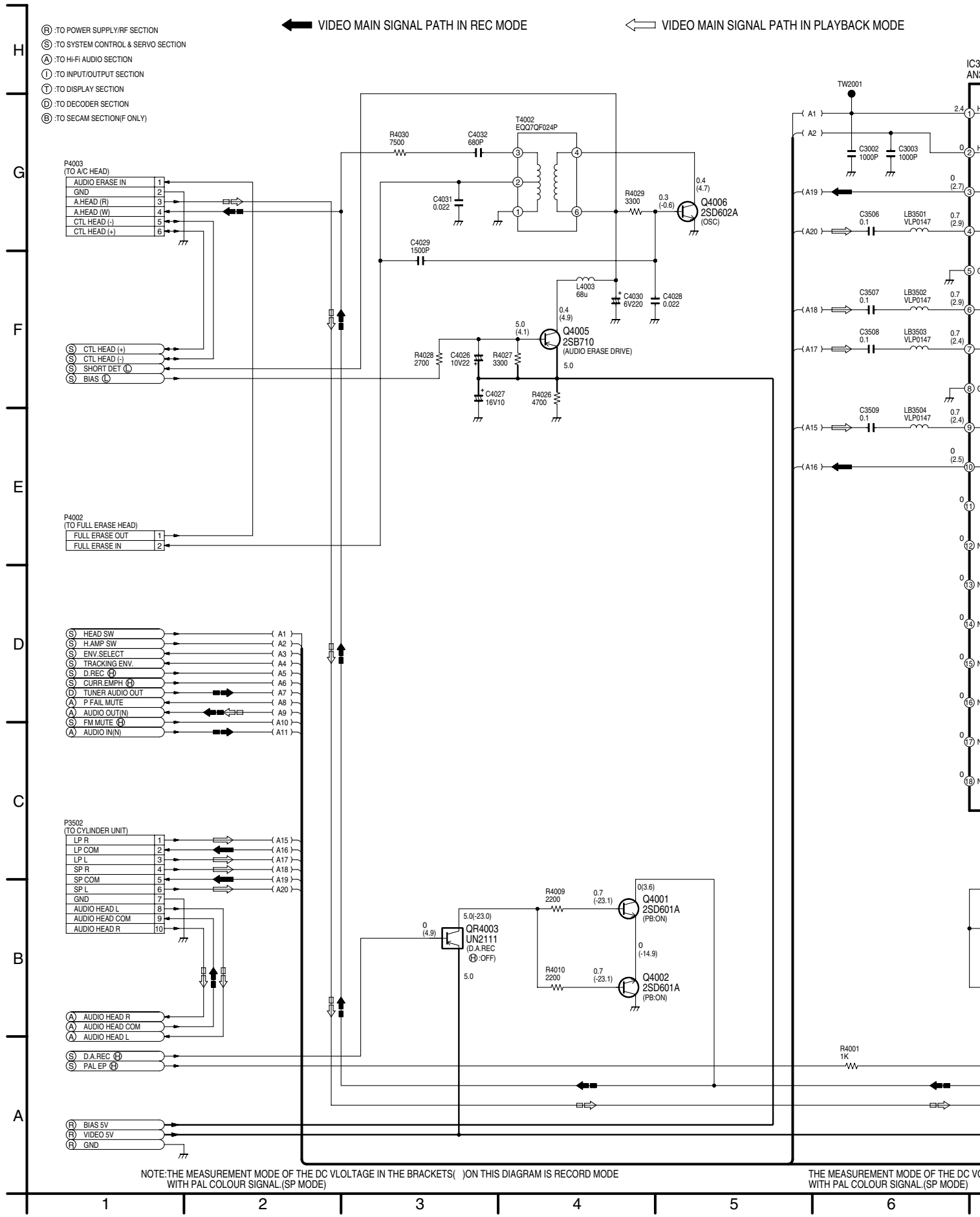


DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

18 19 20 21 22

15.5. LUMINANCE & CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRA

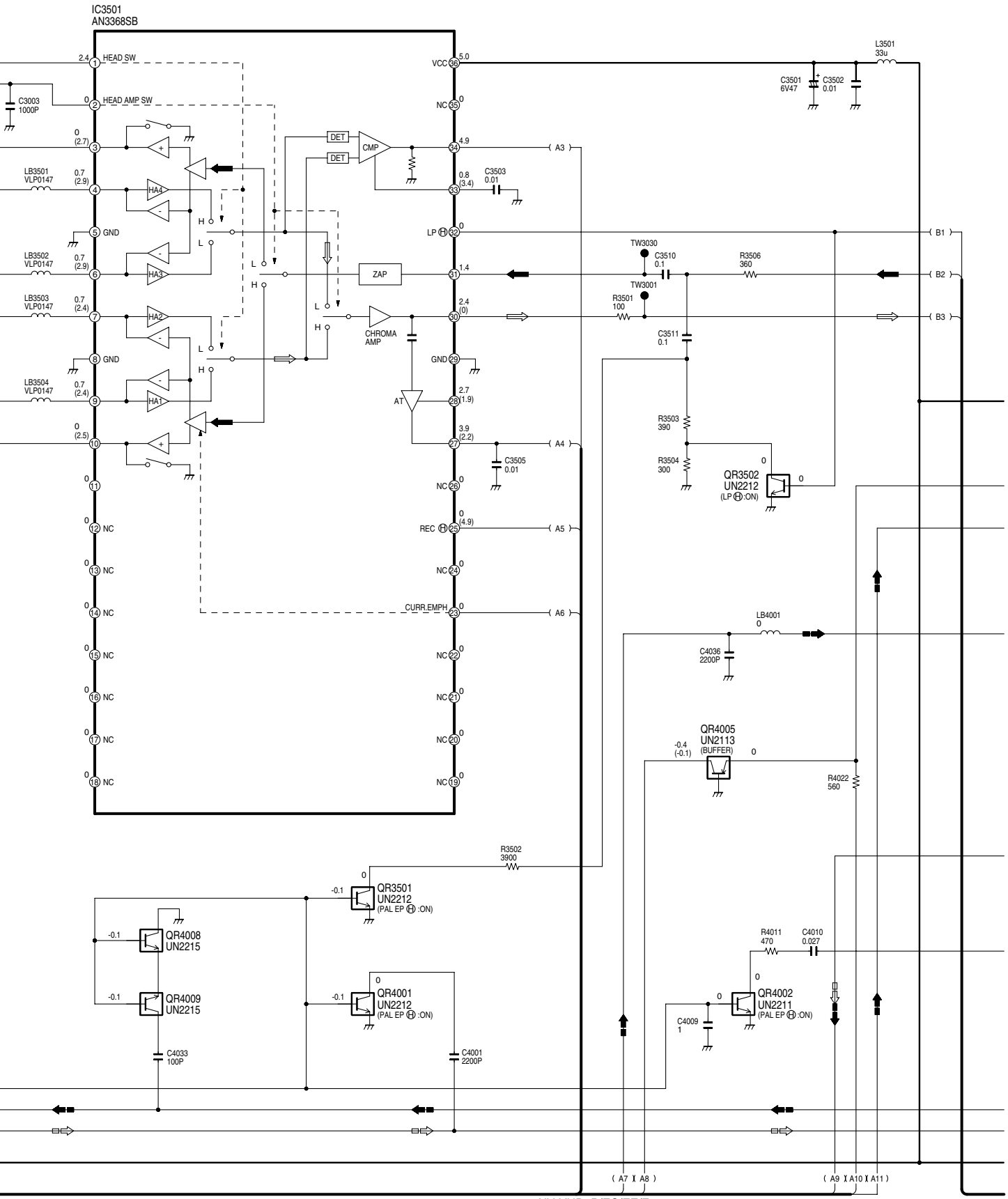


DIAGRAM

ODE

AUDIO MAIN SIGNAL PATH IN REC MODE

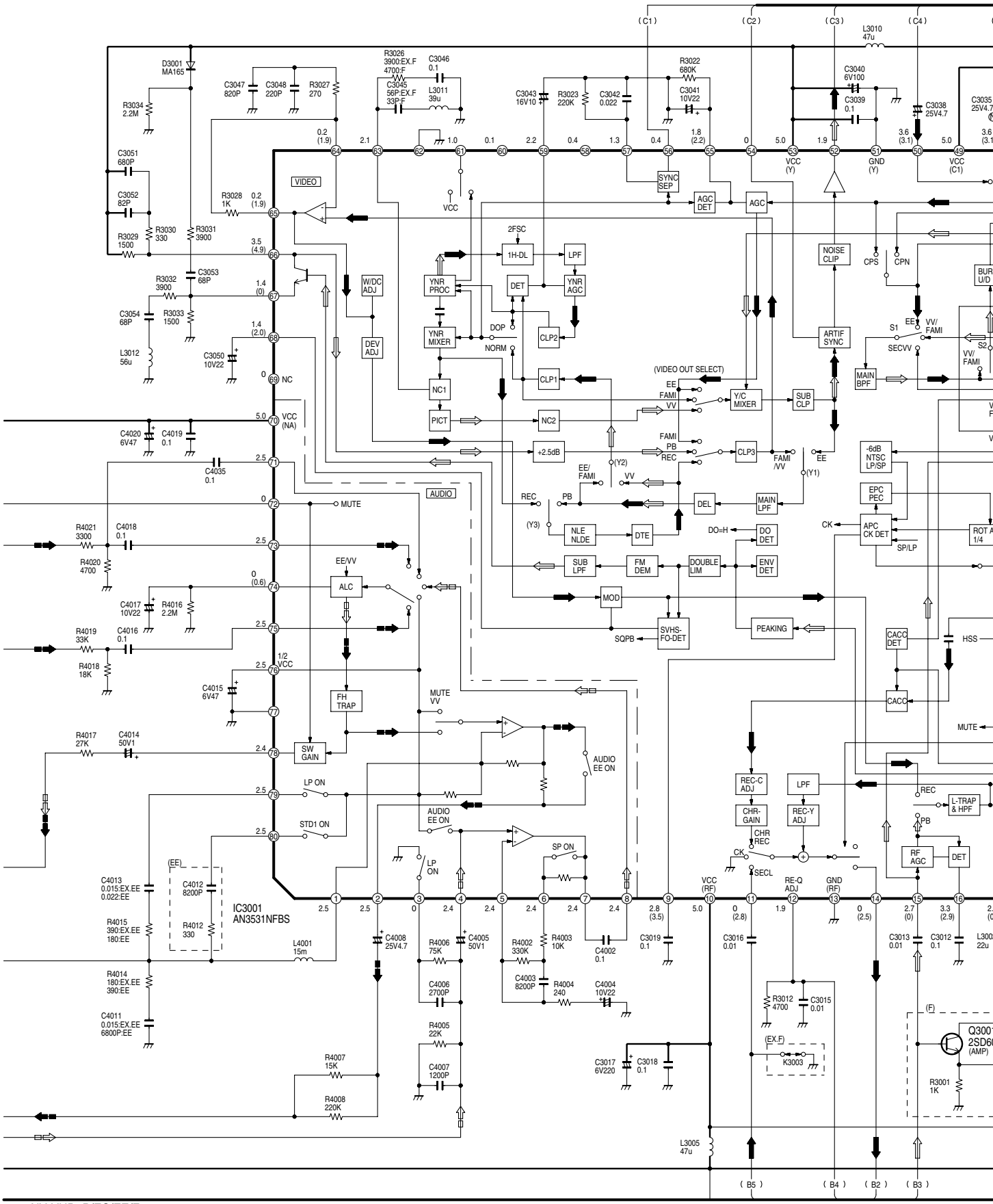
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



ENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE
R SIGNAL.(SP MODE)

NV-VHD1B/EC/EE/F
LUMINANCE & CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

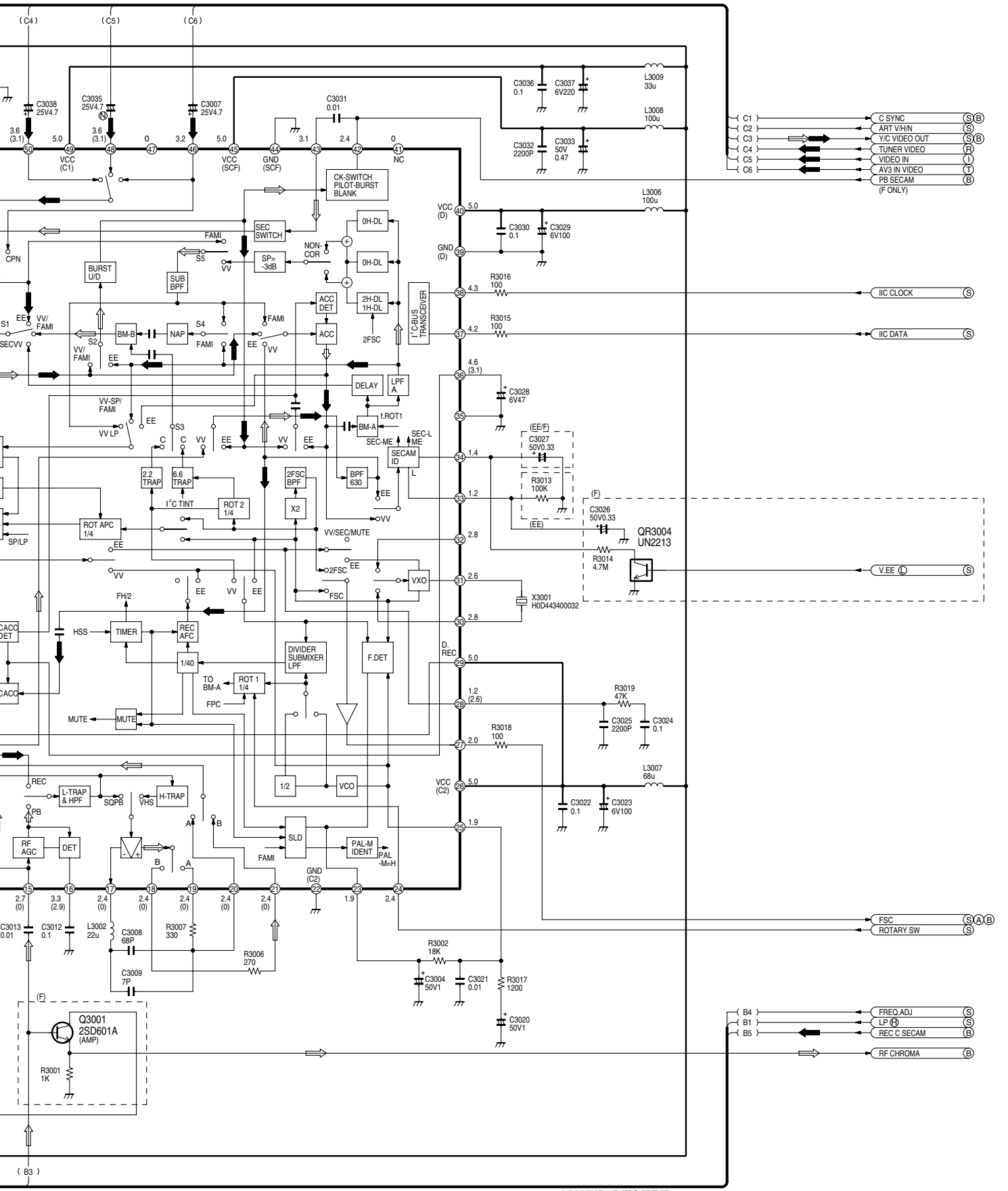
6 7 8 9 10 11 12



NV-VHD1B/EC/EE/F
LUMINANCE & CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

NOTE:DO NOT ORDER

12 | 13 | 14 | 15 | 16 | 17

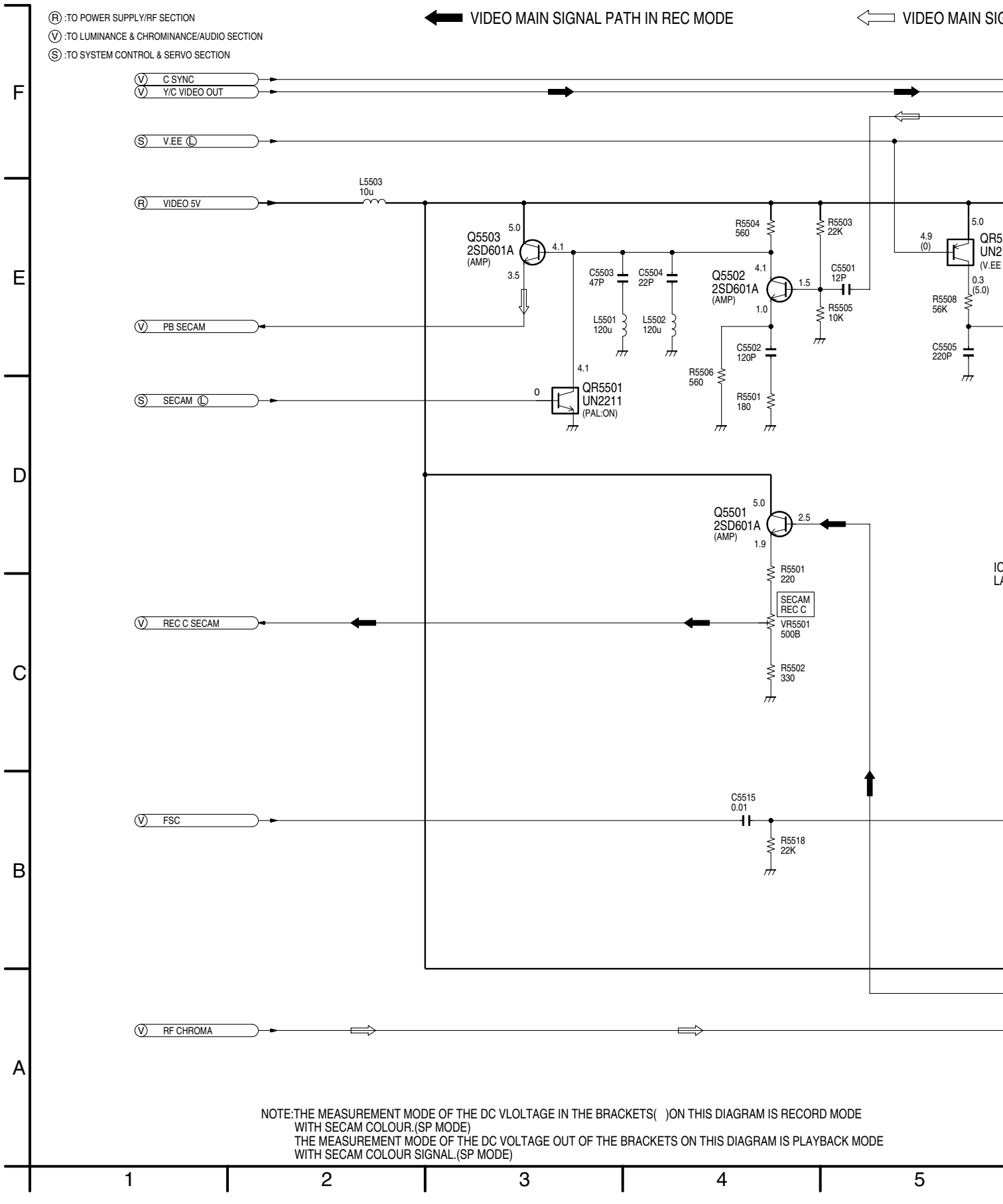


NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

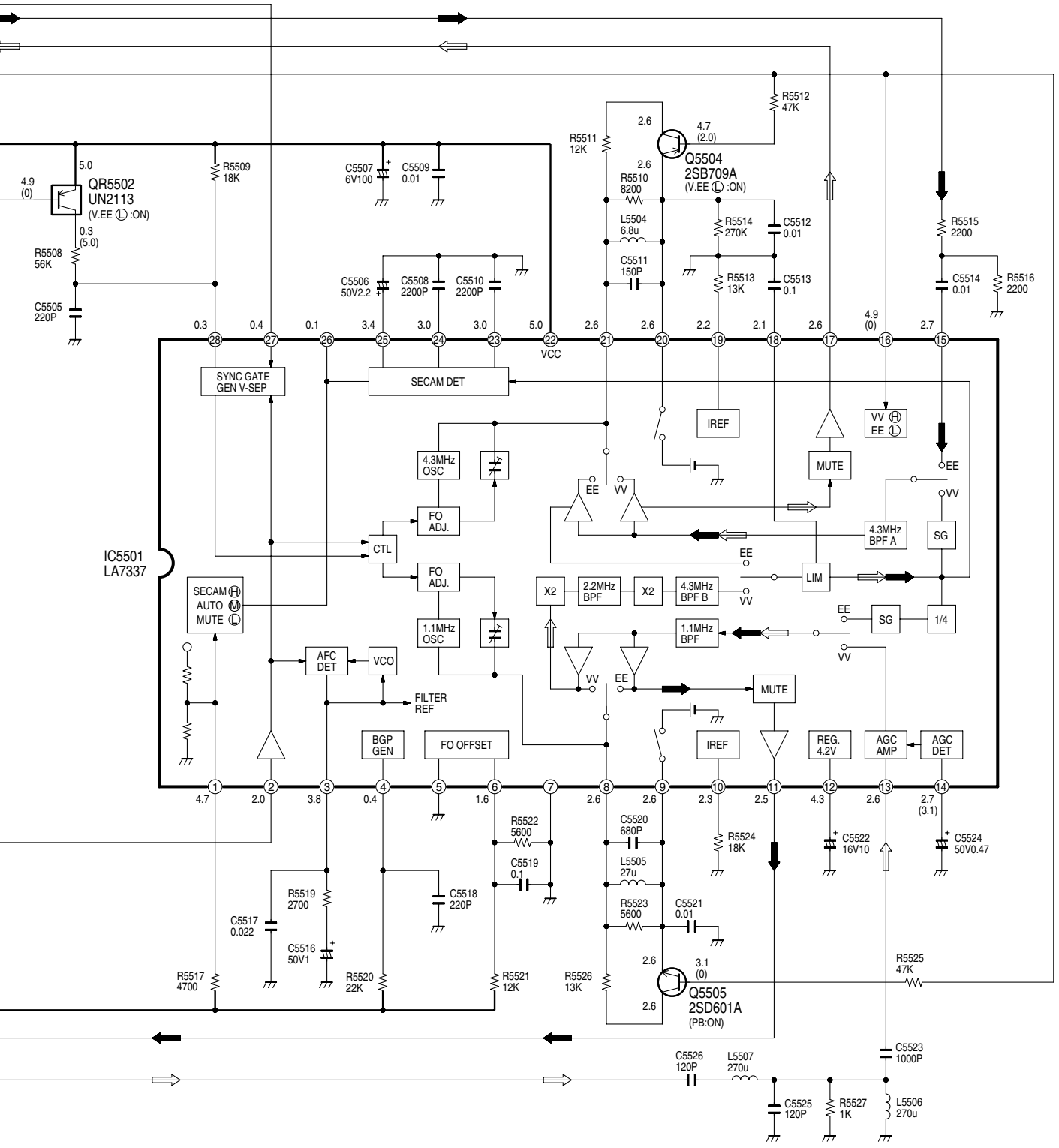
NV-VHD1B/EC/EE/F
LUMINANCE & CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

18	19	20	21	22	23

15.6. SECAM SECTION IN MAIN SCHEMATIC DIAGRAM (NV-VHD1F)



VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

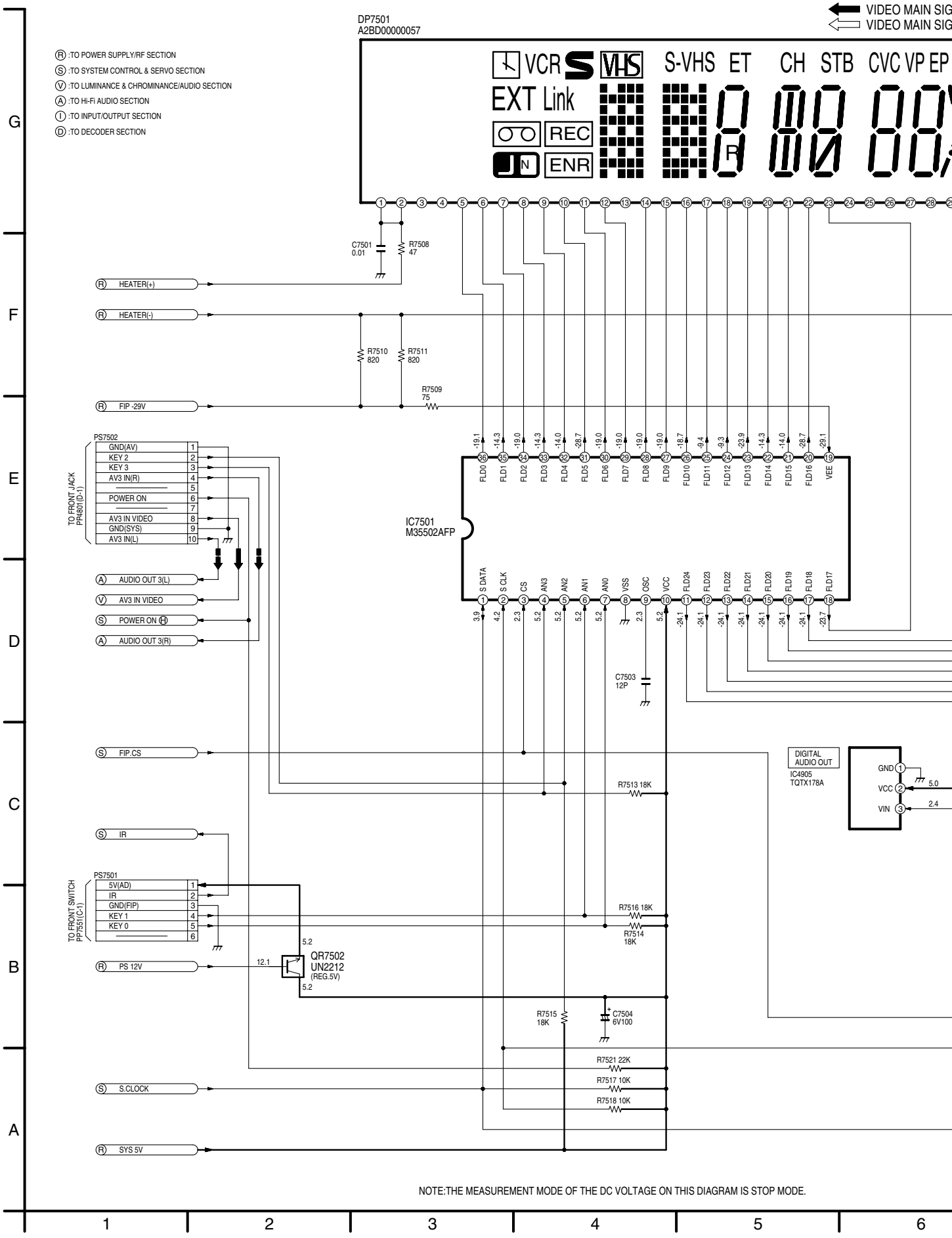


NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

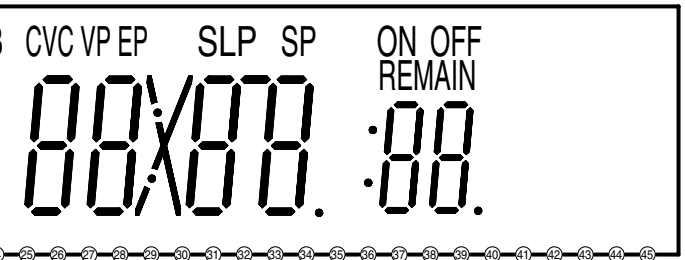
NV-VHD1B/EC/EE/F
SECAM SECTION IN MAIN SCHEMATIC DIAGRAM

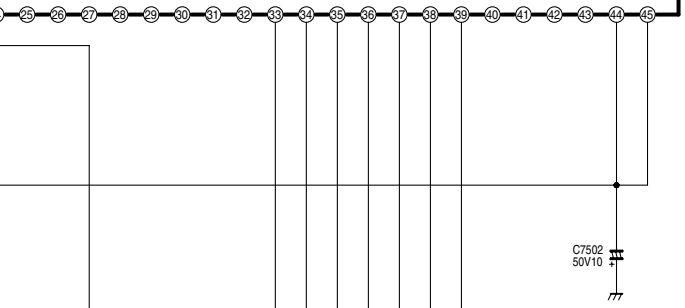
5 | 6 | 7 | 8 | 9

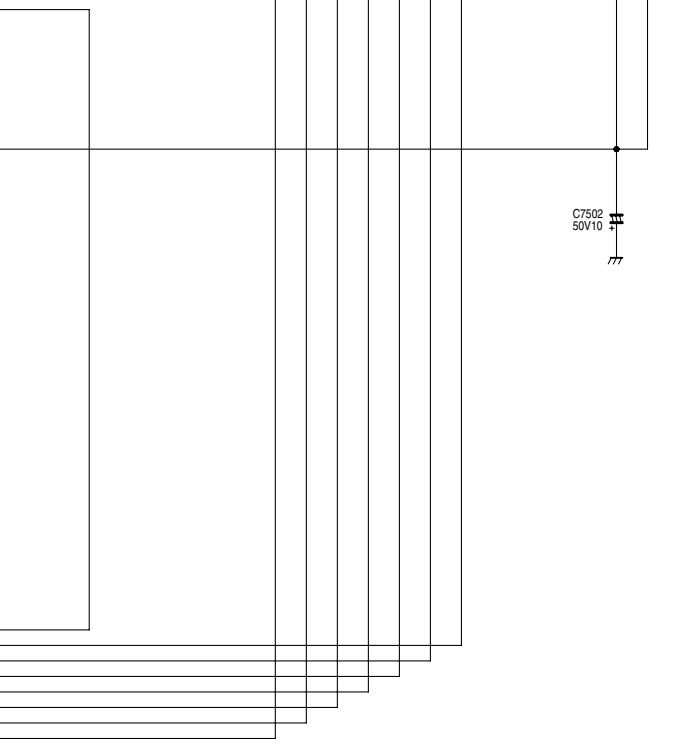
15.7. VCR DISPLAY SECTION IN MAIN SCHEMATIC DIAGRAM

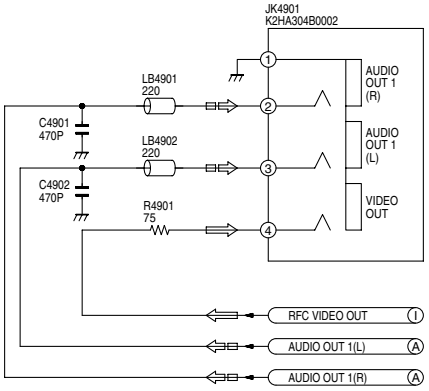


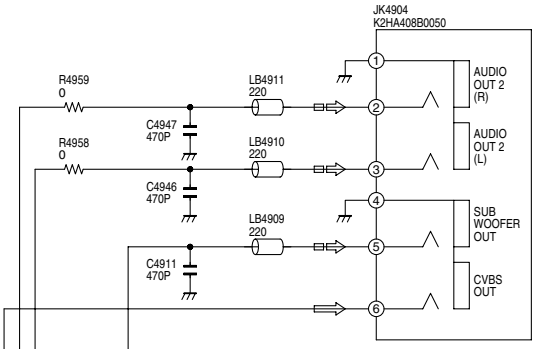
VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

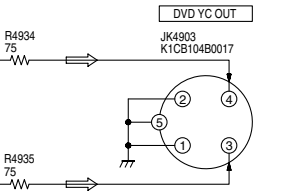


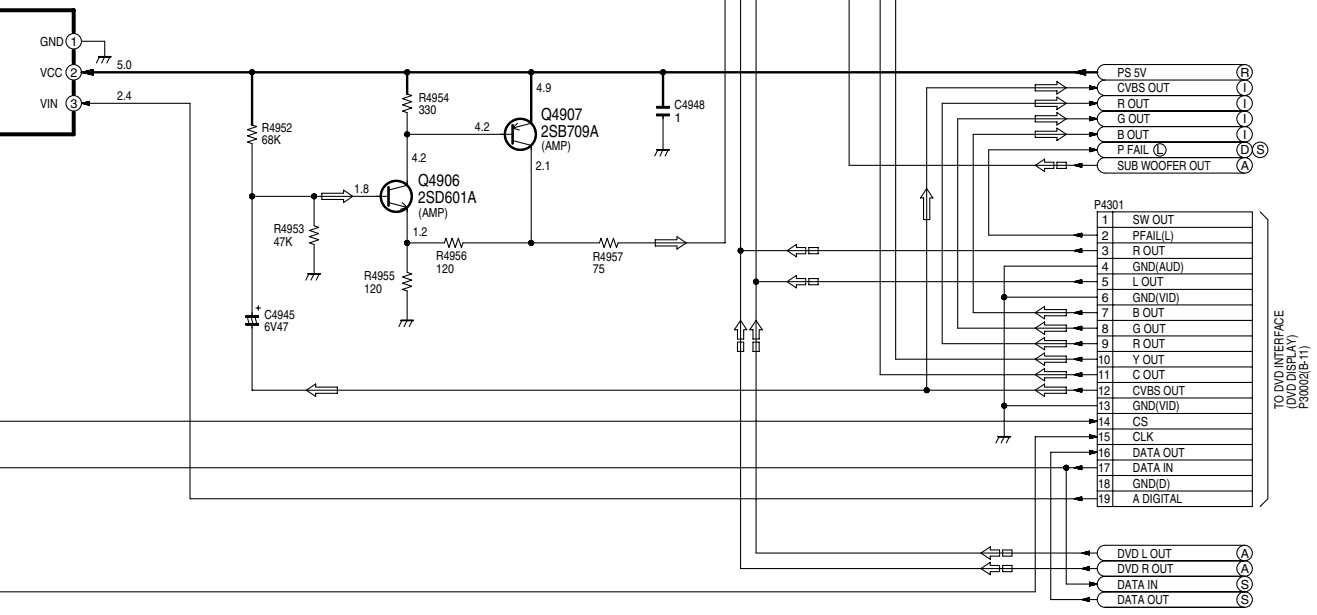










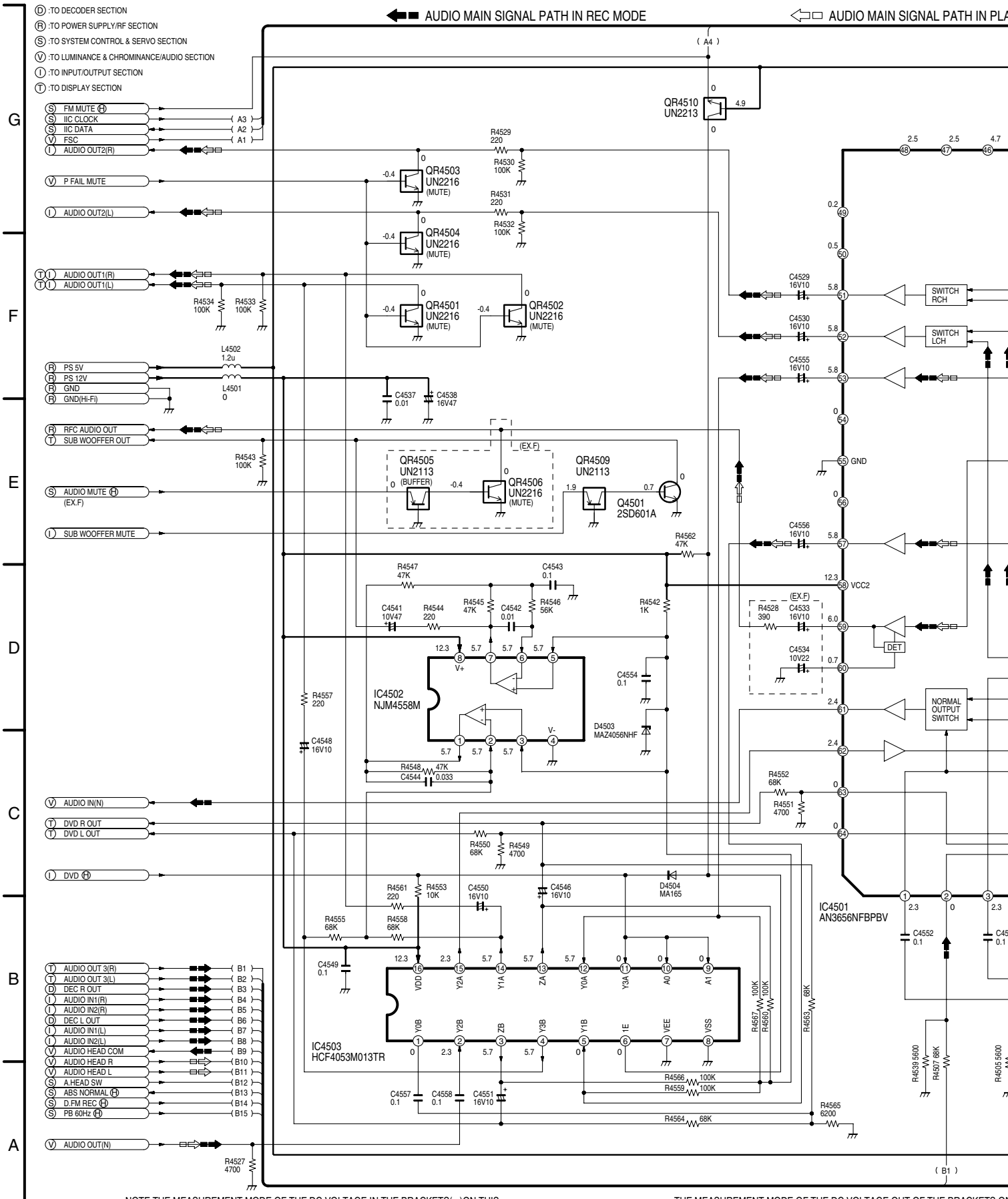


NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

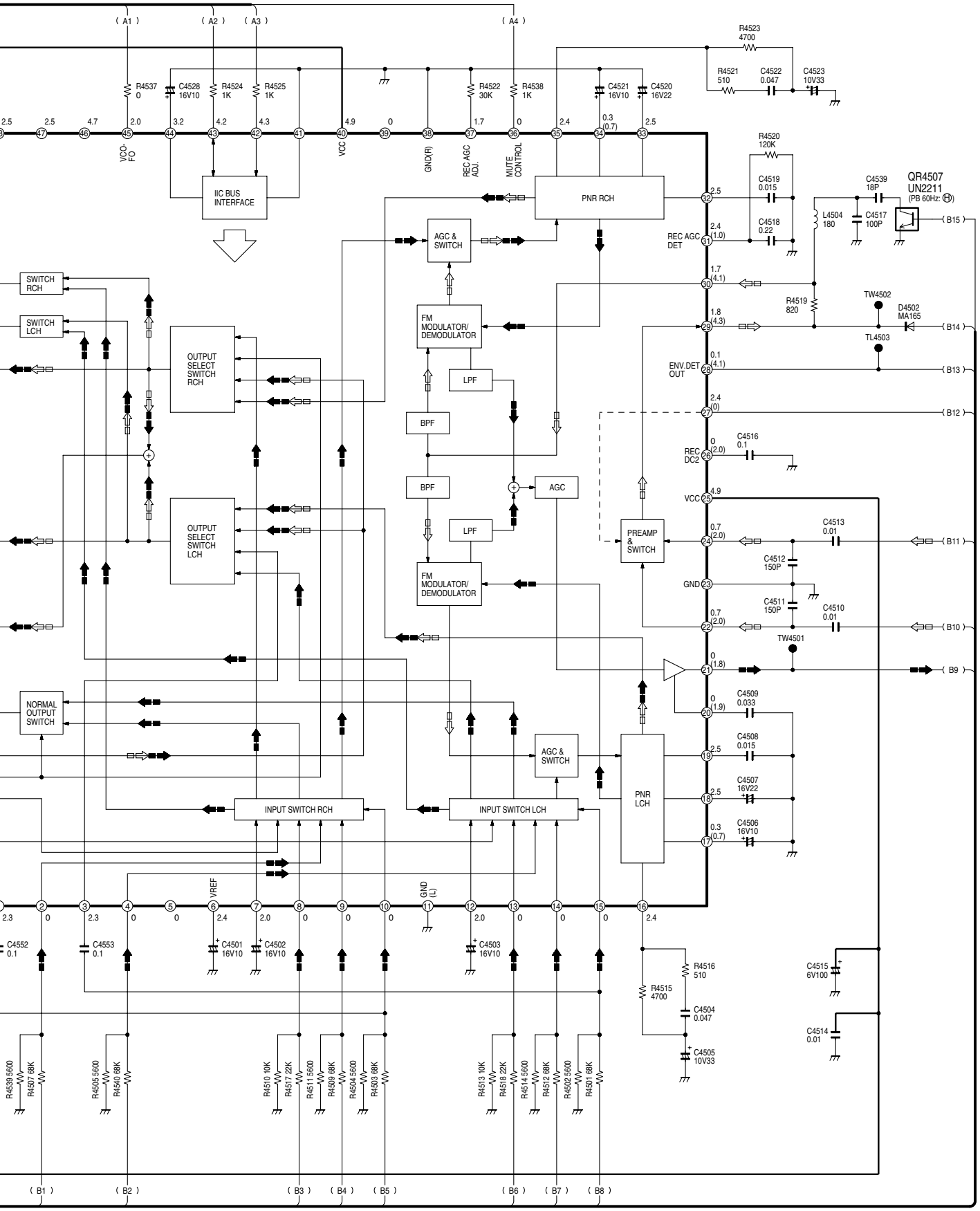
NV-VHD1B/EC/EE/F
VCR DISPLAY SECTION IN MAIN SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10 | 11

15.8. Hi-Fi AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM



IGNAL PATH IN PLAYBACK MODE



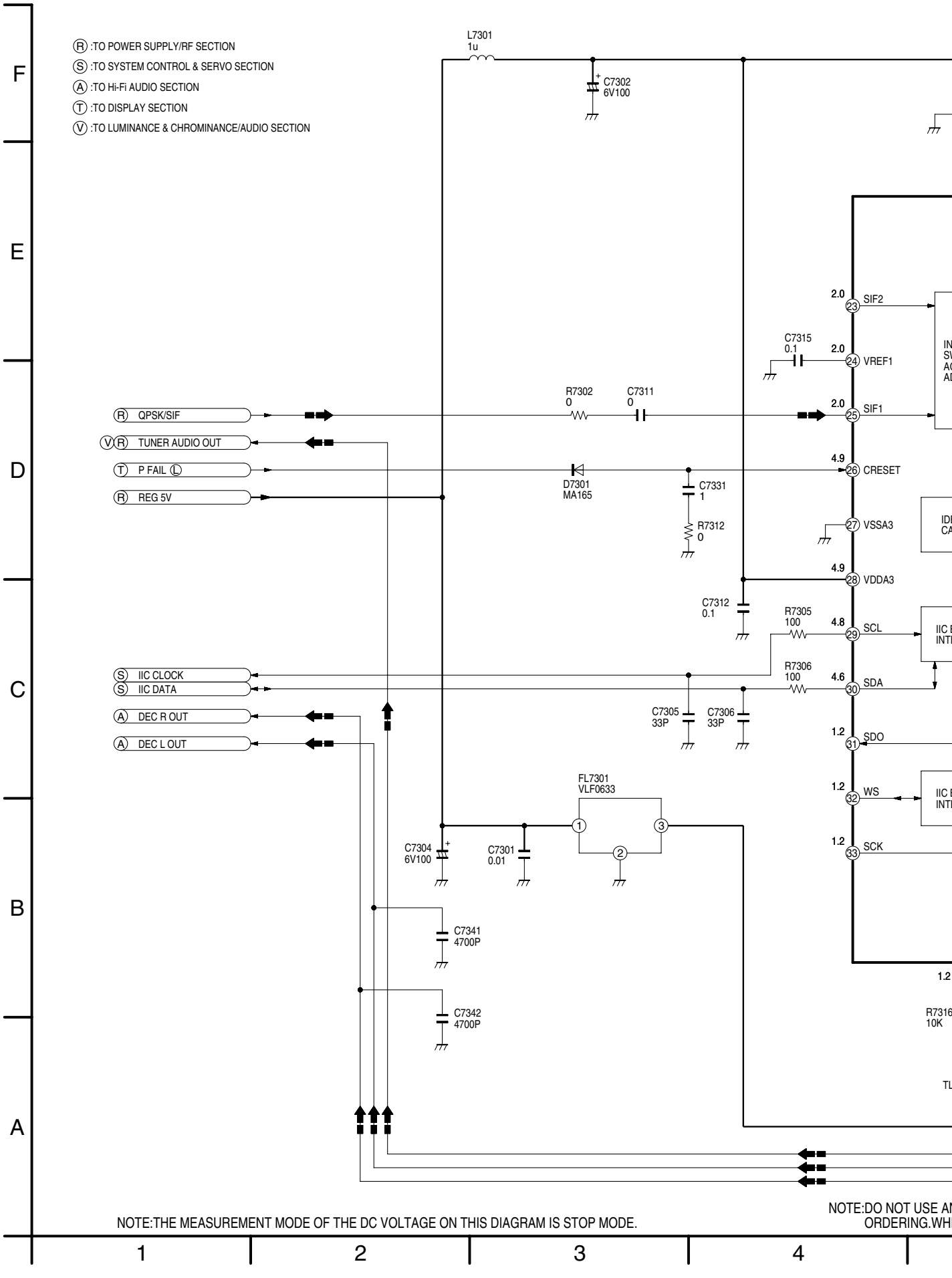
T OF THE BRACKETS ON THIS
GNAL.(SP MODE)

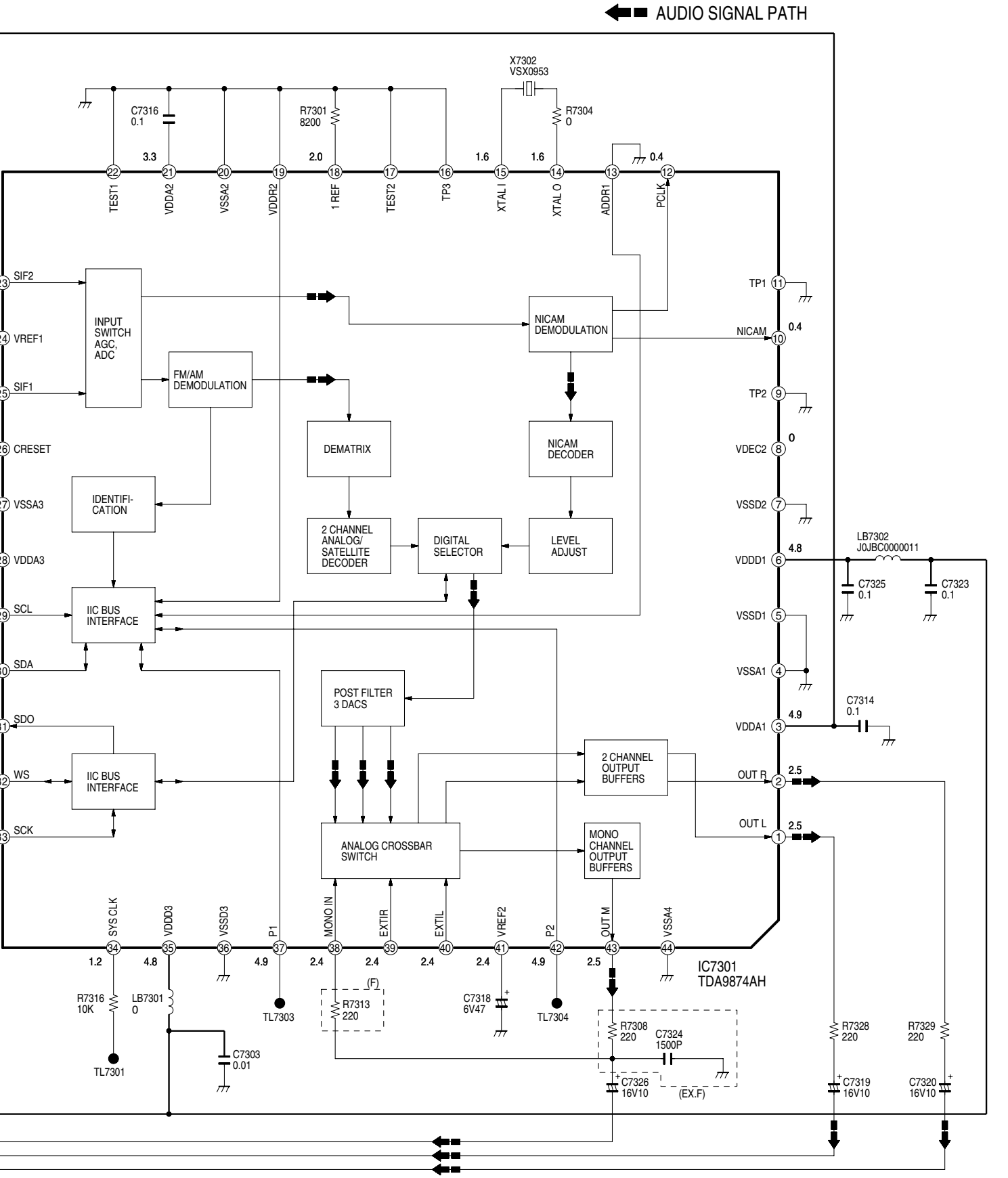
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
Hi-Fi AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

6	7	8	9	10	11

15.9. DECODER SECTION IN MAIN SCHEMATIC DIAGRAM



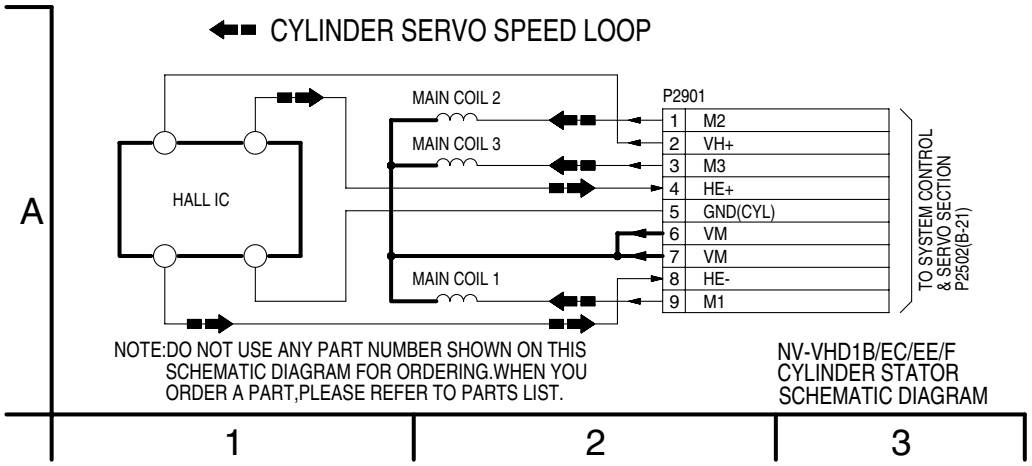


TE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

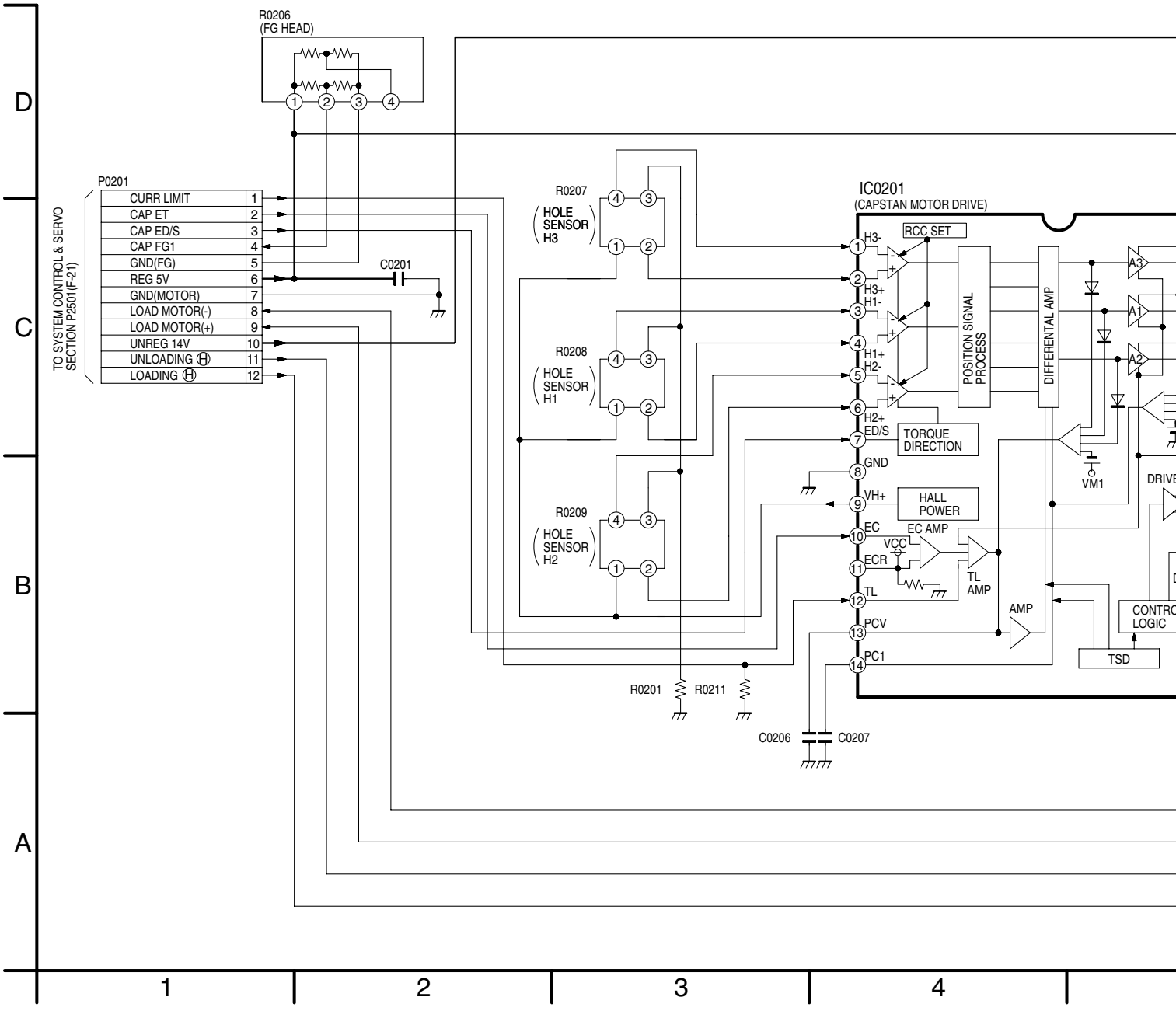
NV-VHD1B/EC/EE/F
DECODER SECTION IN MAIN SCHEMATIC DIAGRAM

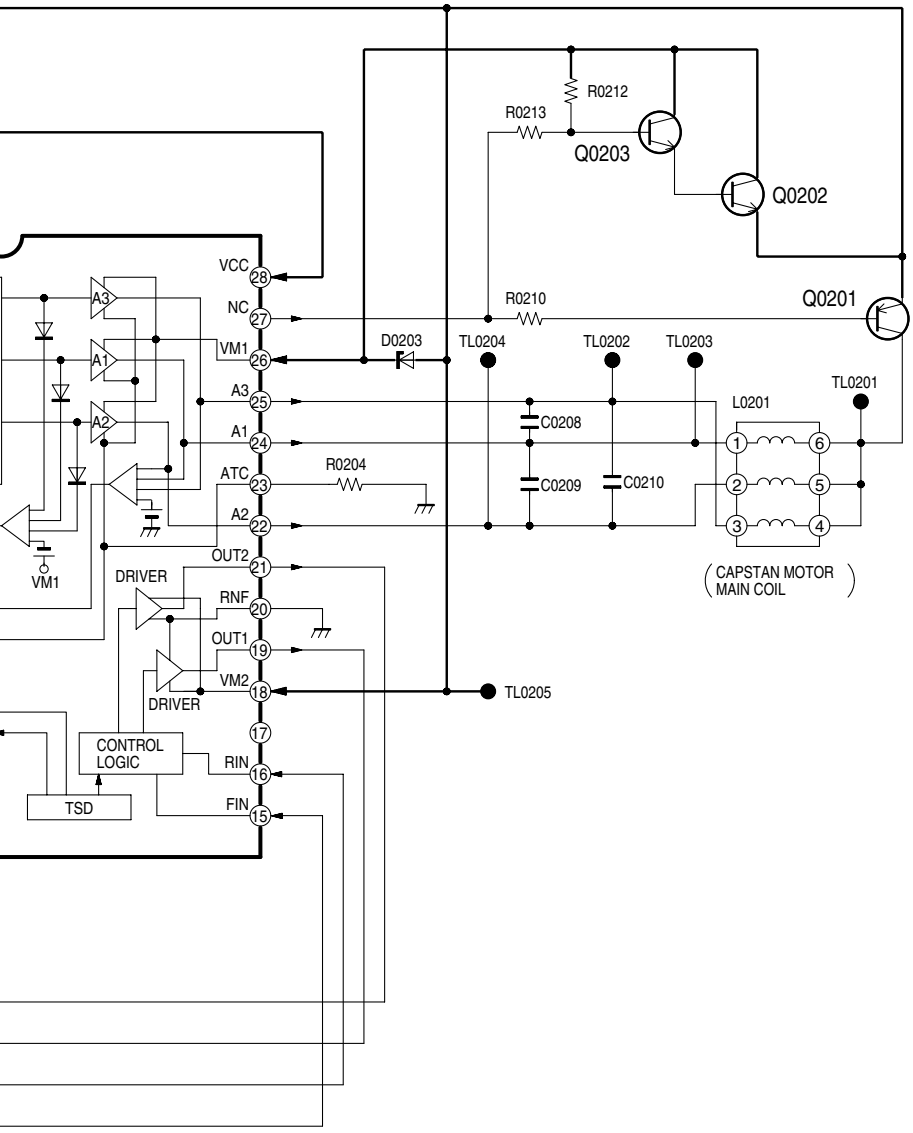
5 6 7 8

15.10. CYLINDER STATOR UNIT SCHEMATIC DIAGRAM



15.11. CAPSTAN UNIT SCHEMATIC DIAGRAM

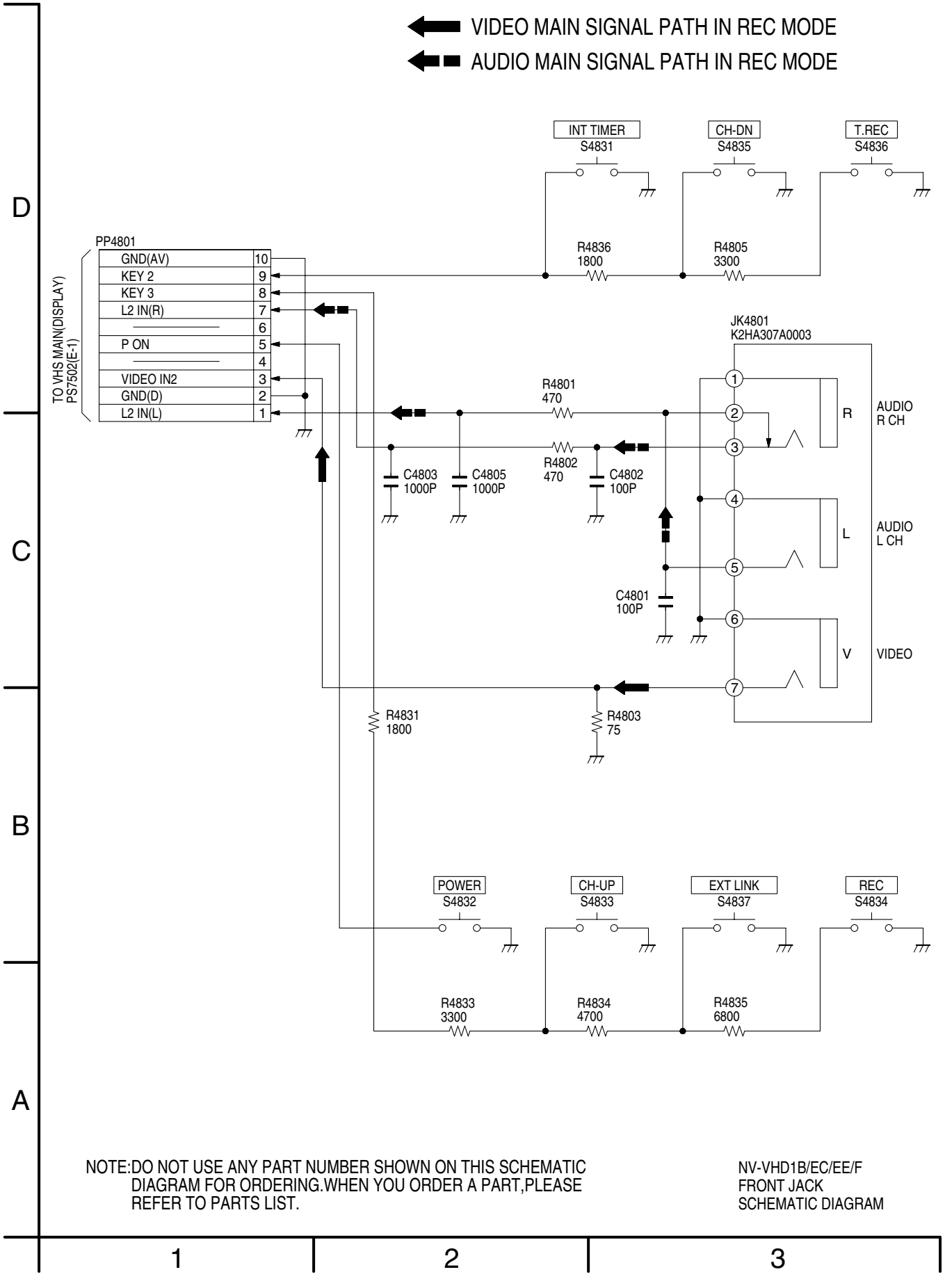




NV-VHD1B/EC/EE/F
CAPSTAN UNIT SCHEMATIC DIAGRAM

5 6 7

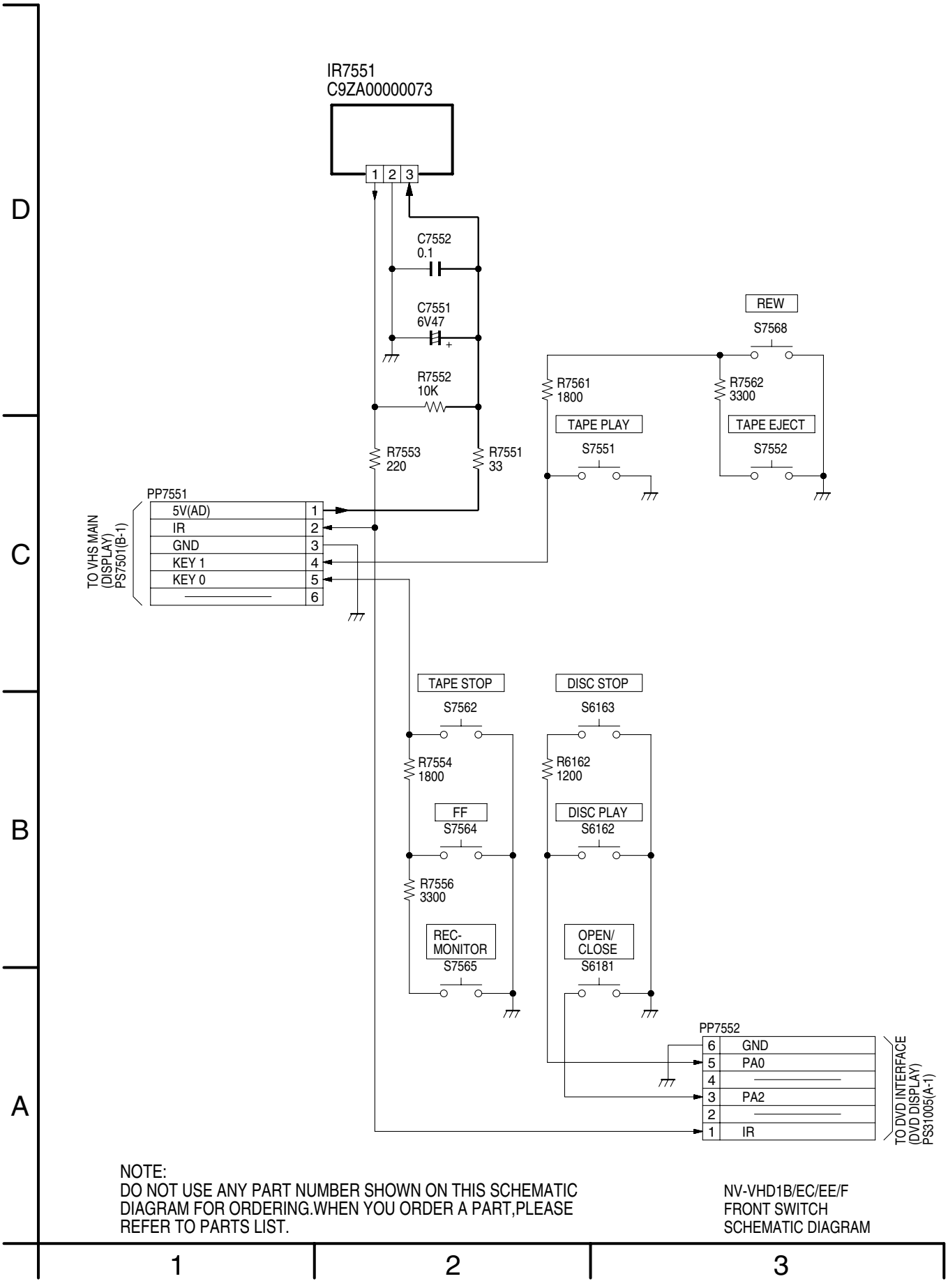
15.12. FRONT JACK SCHEMATIC DIAGRAM



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
FRONT JACK
SCHEMATIC DIAGRAM

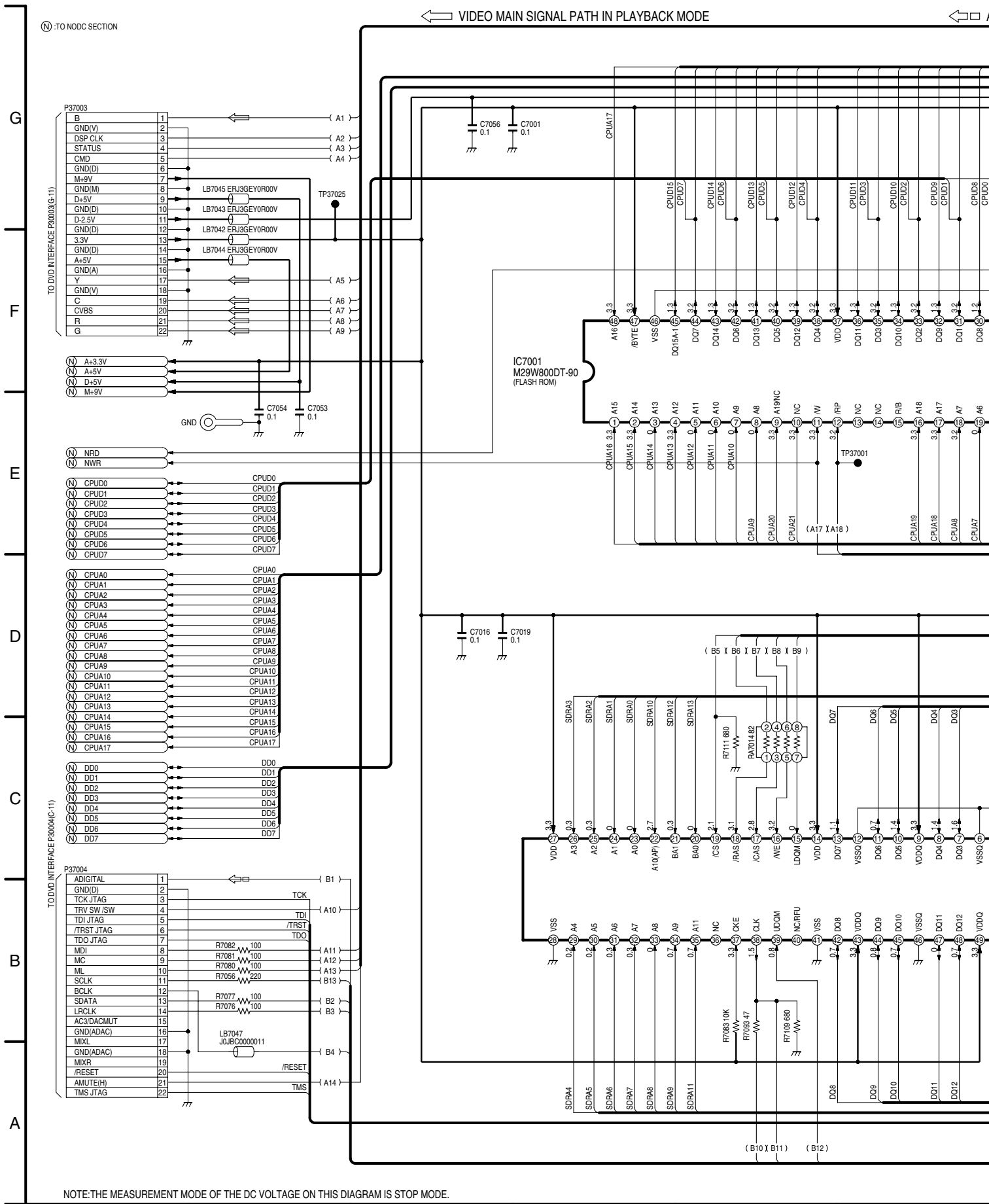
15.13. FRONT SWITCH SCHEMATIC DIAGRAM



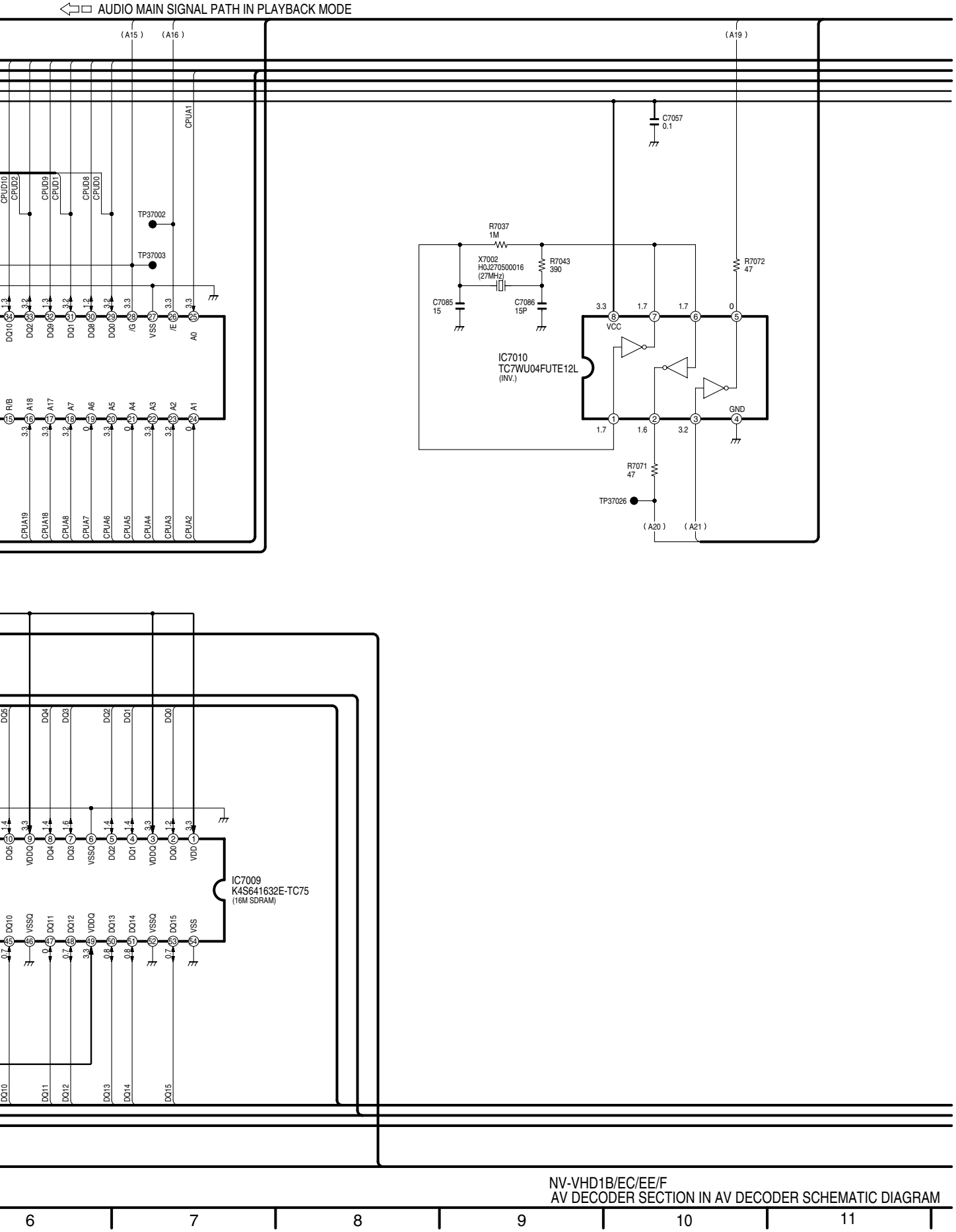
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
FRONT SWITCH
SCHEMATIC DIAGRAM

15.14. AV DECODER SECTION IN AV DECODER SCHEMATIC DIAGRAM

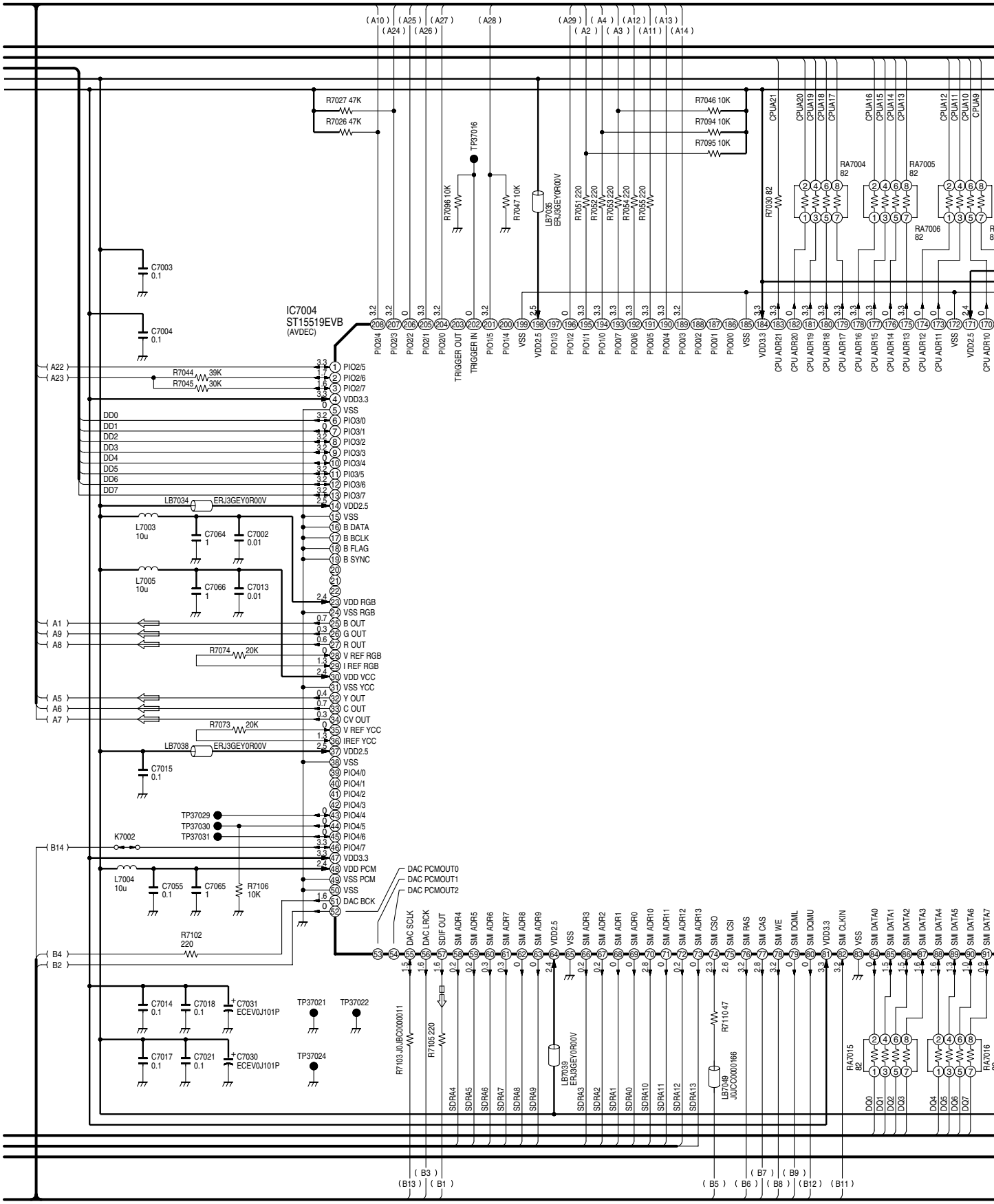


AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

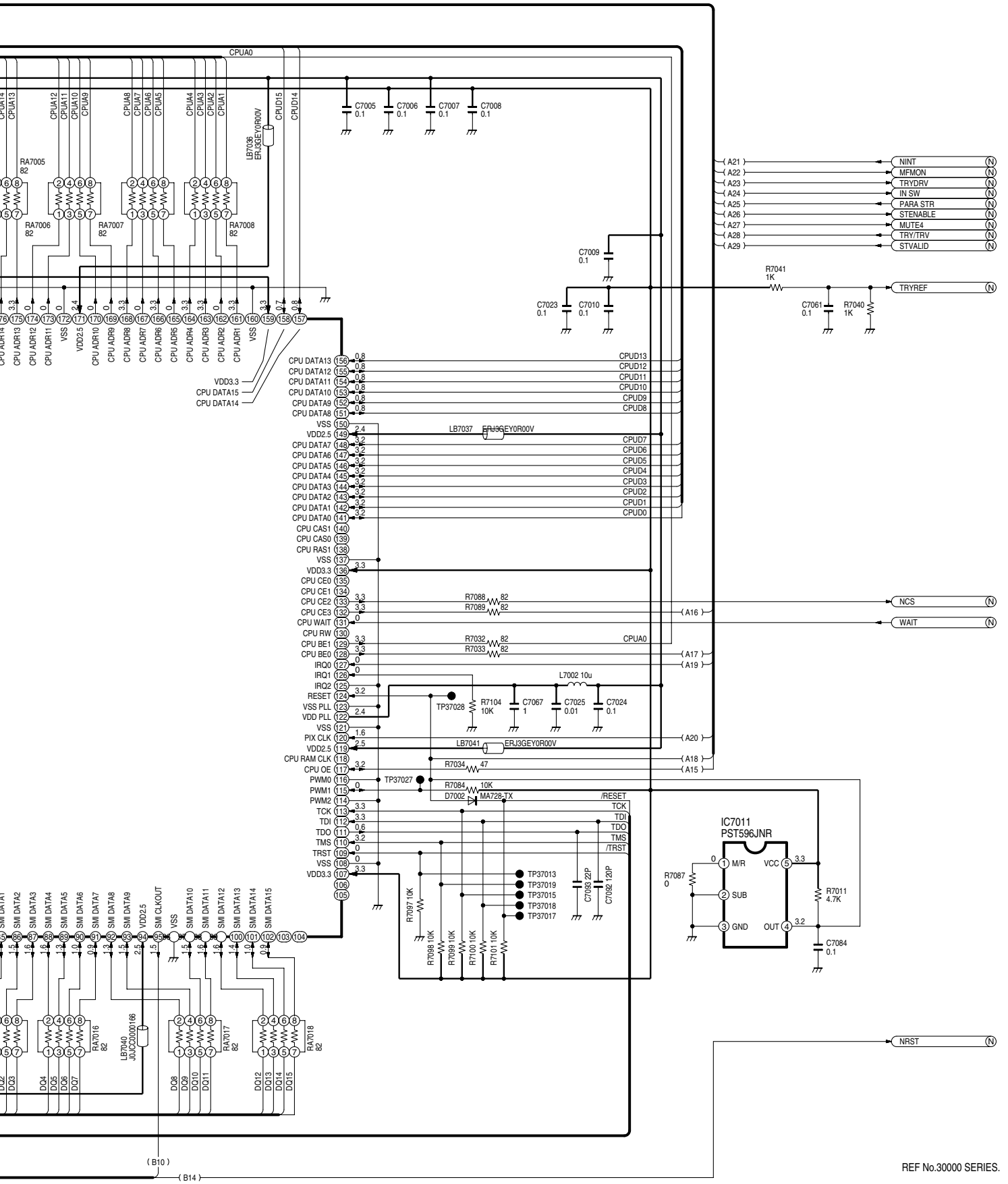


NV-VHD1B/EC/EE/F
AV DECODER SECTION IN AV DECODER SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10 | 11



NV-VHD1B/EC/EE/F
AV DECODER SECTION IN AV DECODER SCHEMATIC DIAGRAM



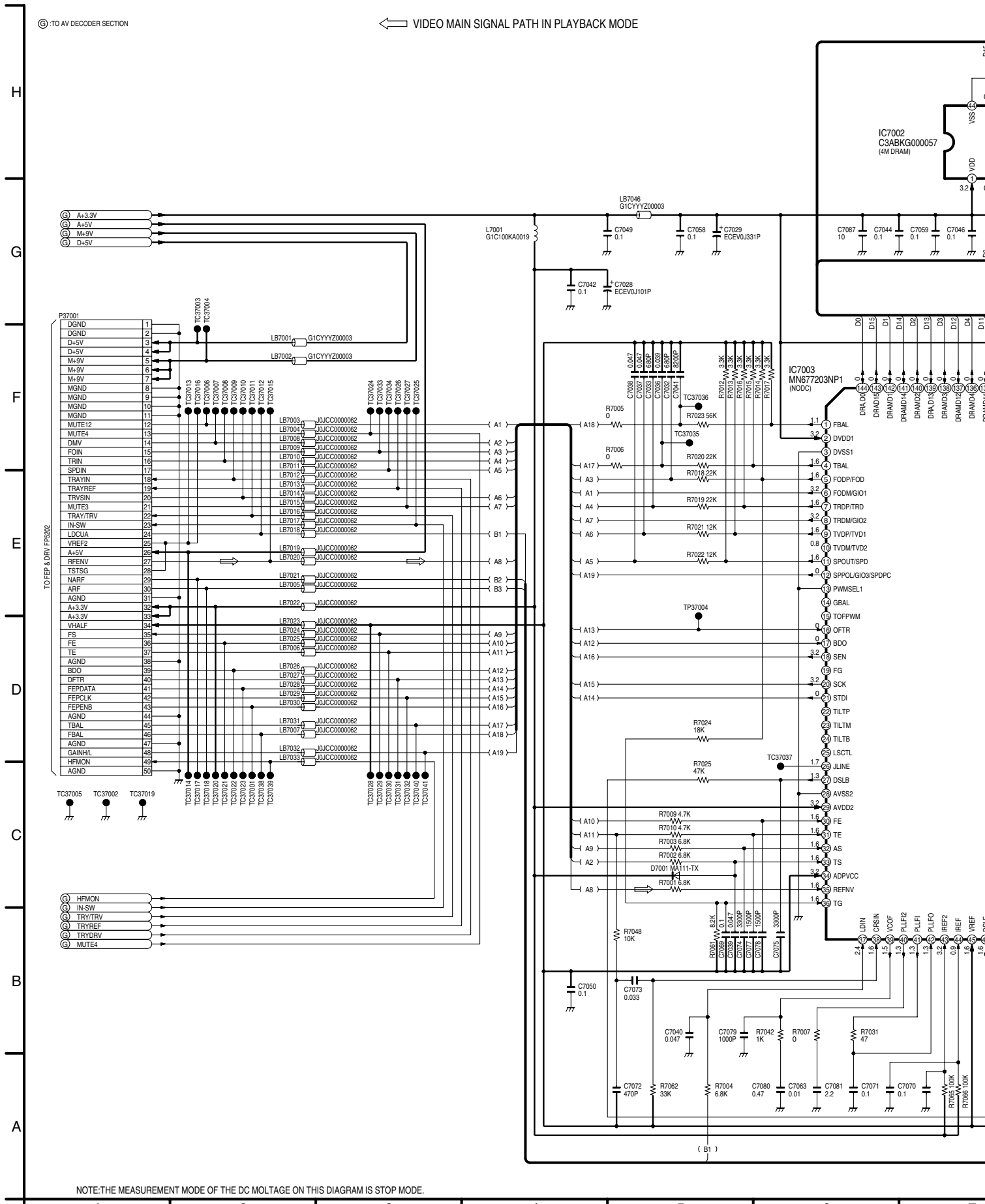
REF No.30000 SERIES.

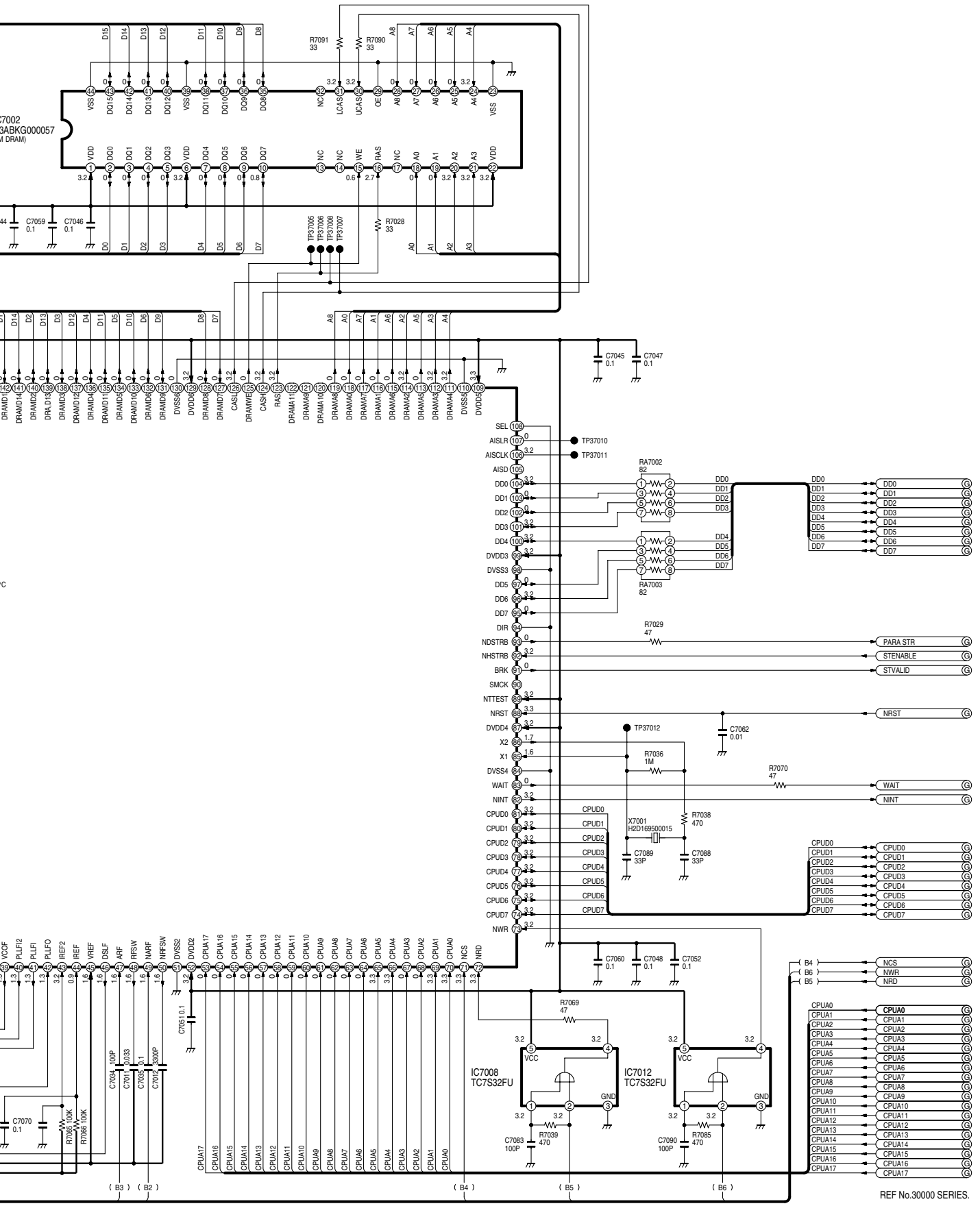
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
AV DECODER SECTION IN AV DECODERSCHEMATIC DIAGRAM

17 | 18 | 19 | 20 | 21 | 22

15.15. NODC SECTION IN AV DECODER SCHEMATIC DIAGRAM





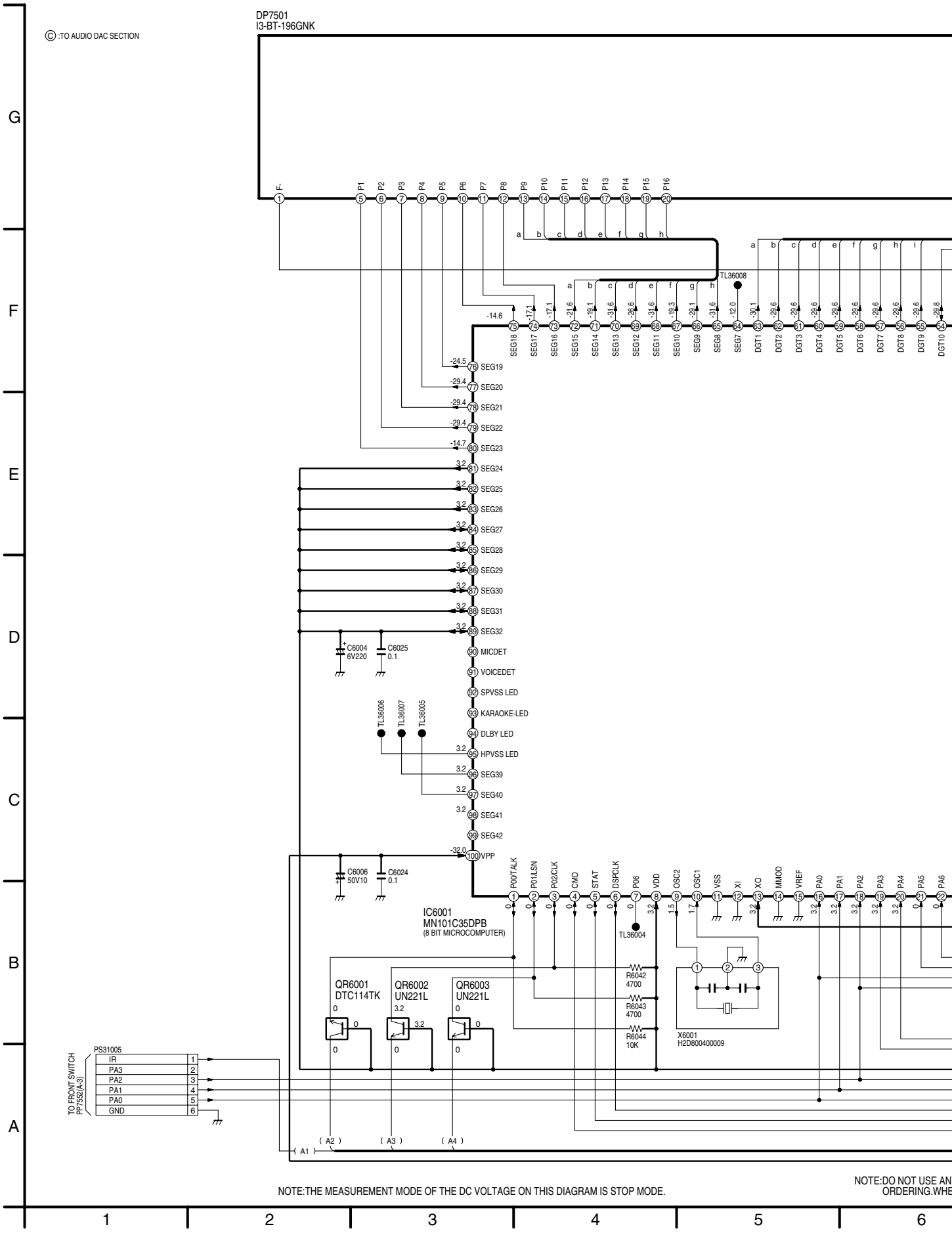
REF No.30000 SERIES.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

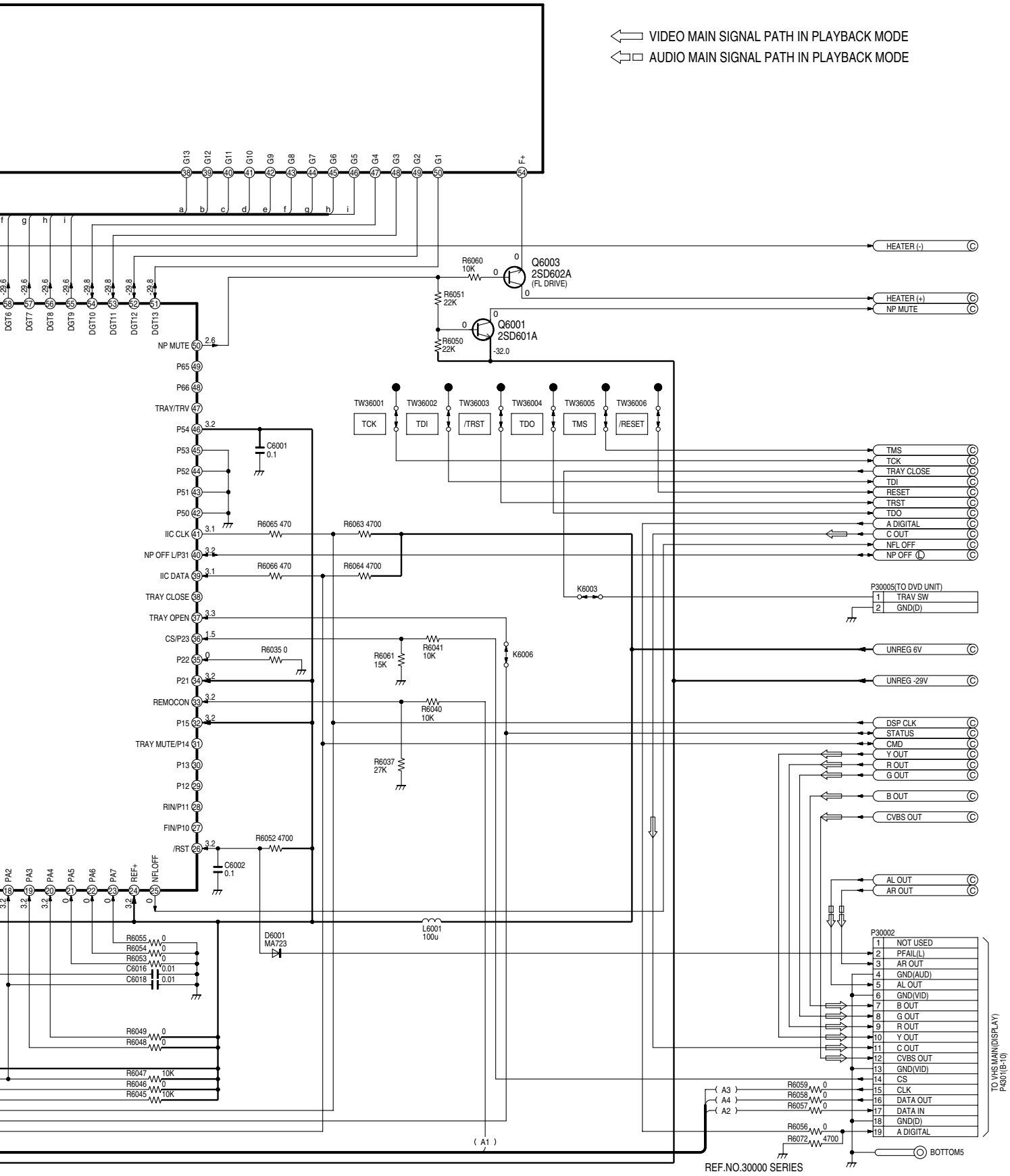
NV-VHD1B/EC/EE/F
NODC SECTION IN AV DECODER SCHEMATIC DIAGRAM

7 | 8 | 9 | 10 | 10 | 11

15.16. DVD DISPLAY SECTION IN DVD INTERFACE SCHEMATIC DIAGRAM



M

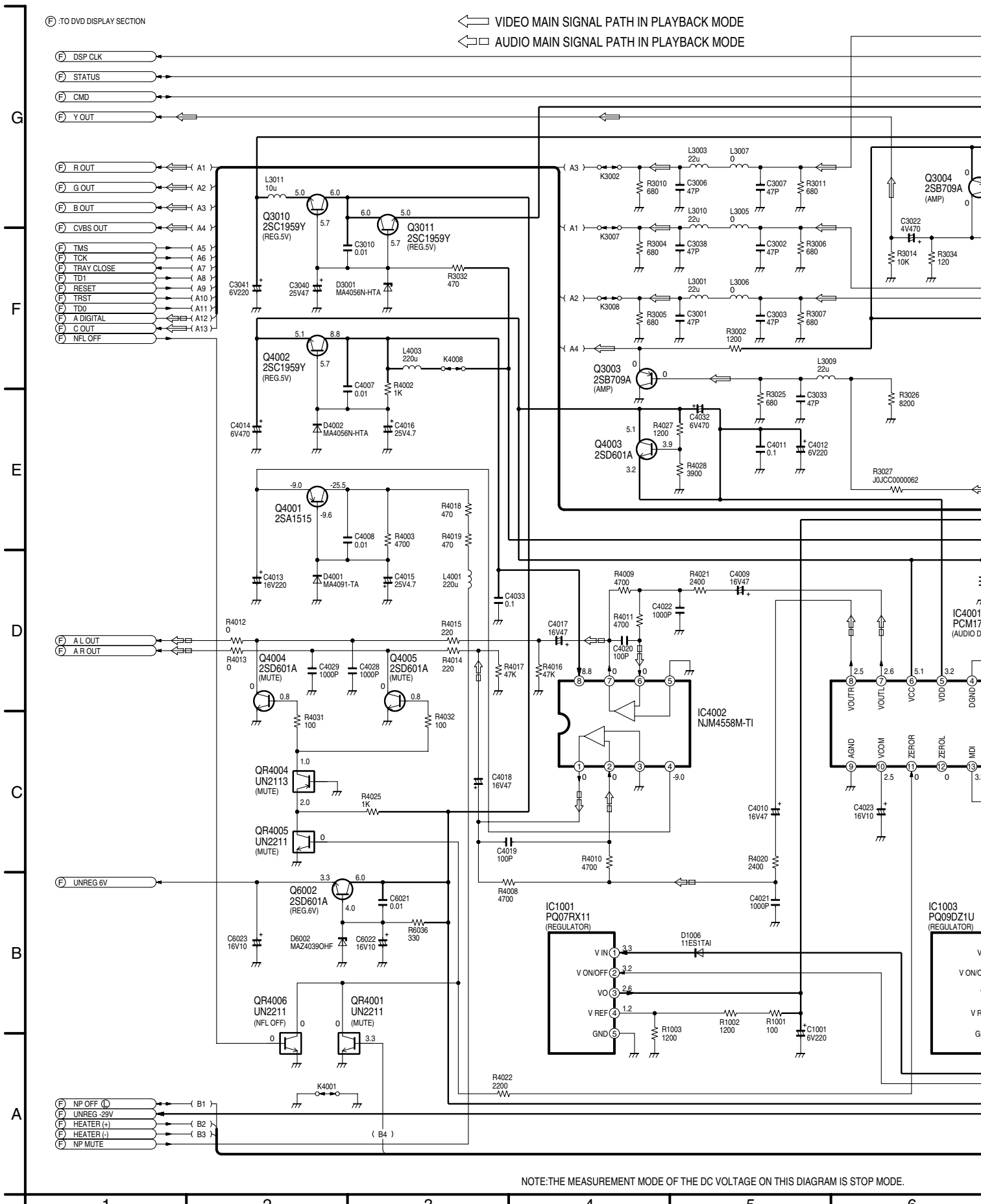


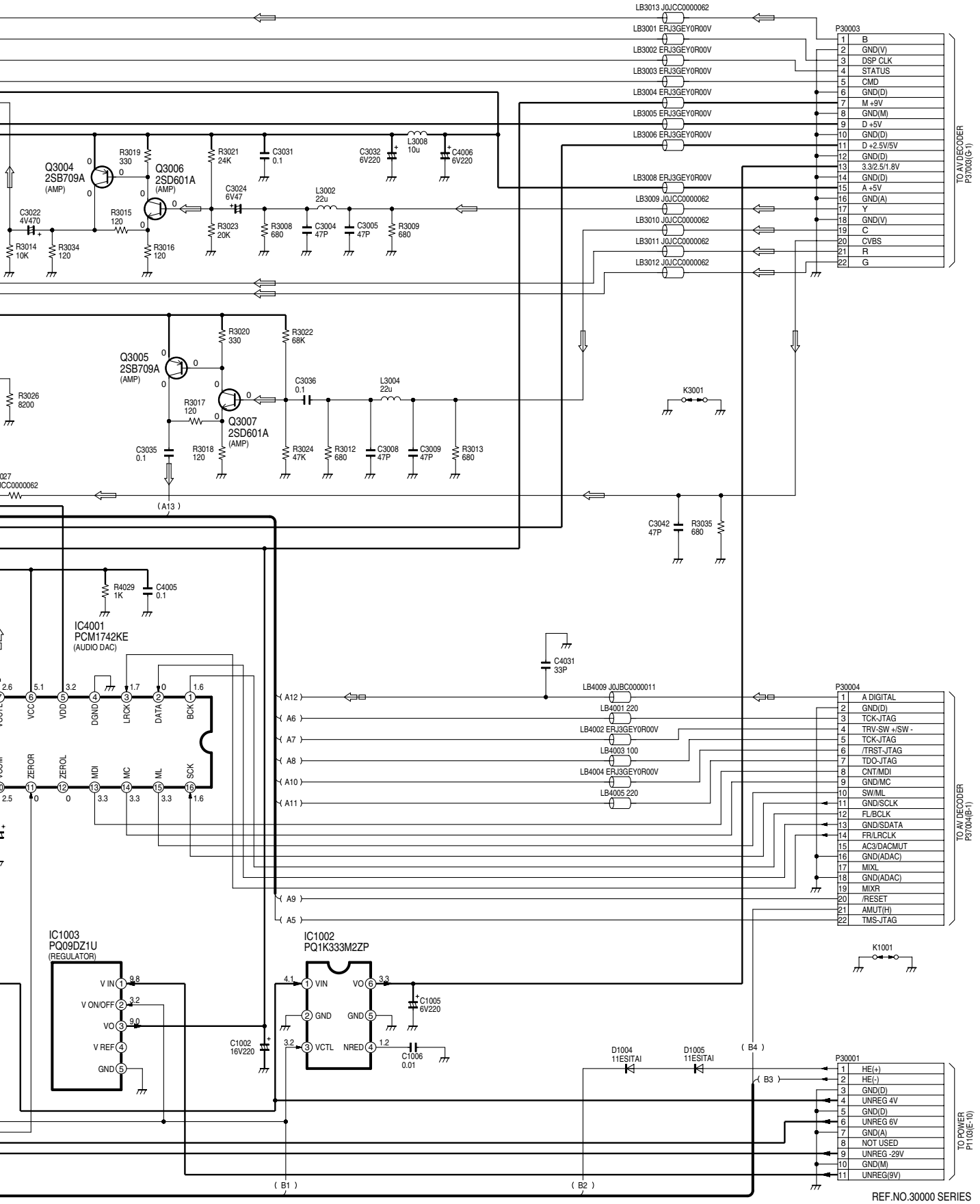
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1B/EC/EE/F
DVD DISPLAY SECTION IN DVD INTERFACE SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10 | 11

15.17. AUDIO DAC SECTION IN DVD INTERFACE SCHEMATIC DIAGRAM





REF.NO.30000 SERIES

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

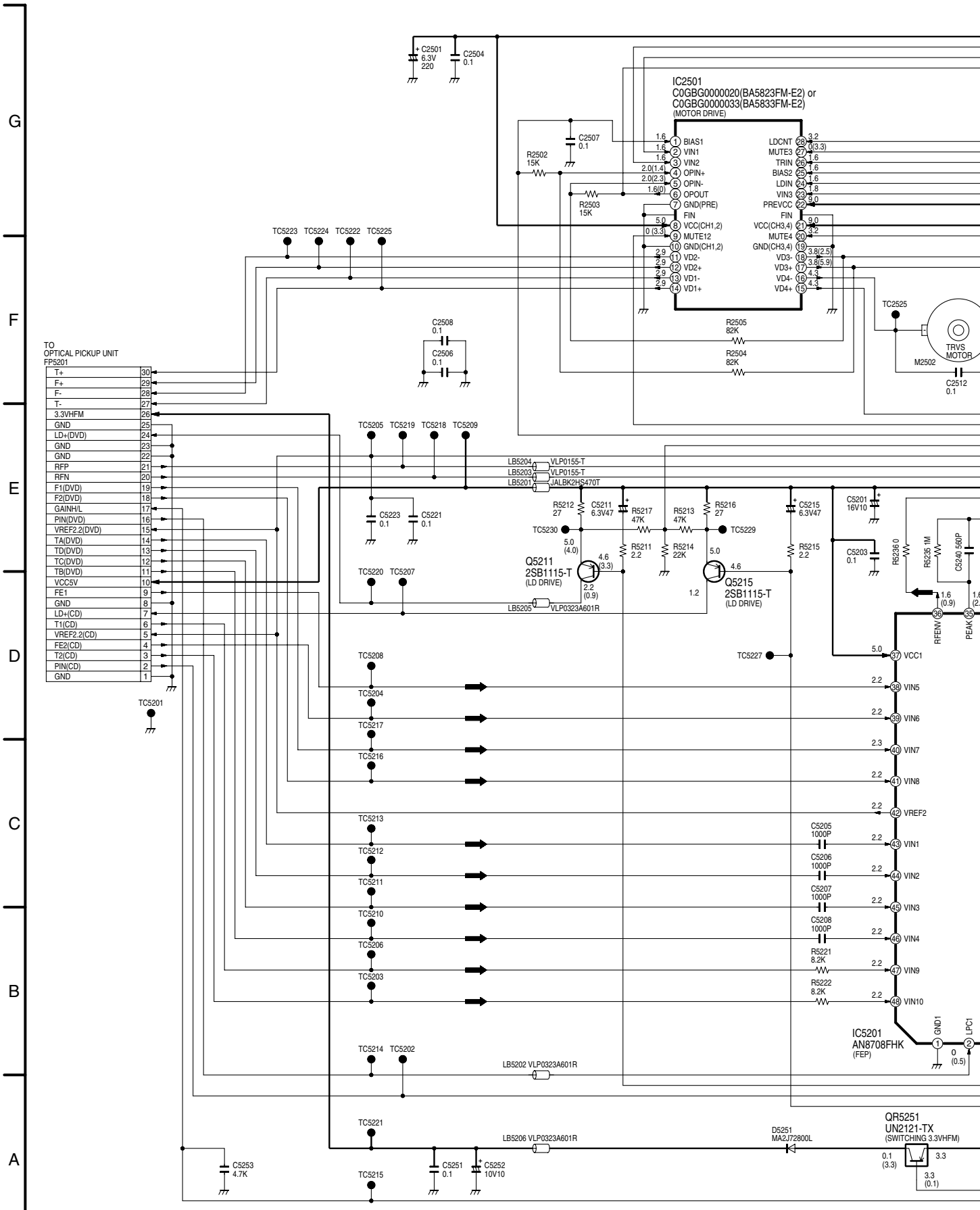
ODE.

NV-VHD1B/EC/EE/F

AUDIO DAC SECTION IN DVD INTERFACE SCHEMATIC DIAGRAM

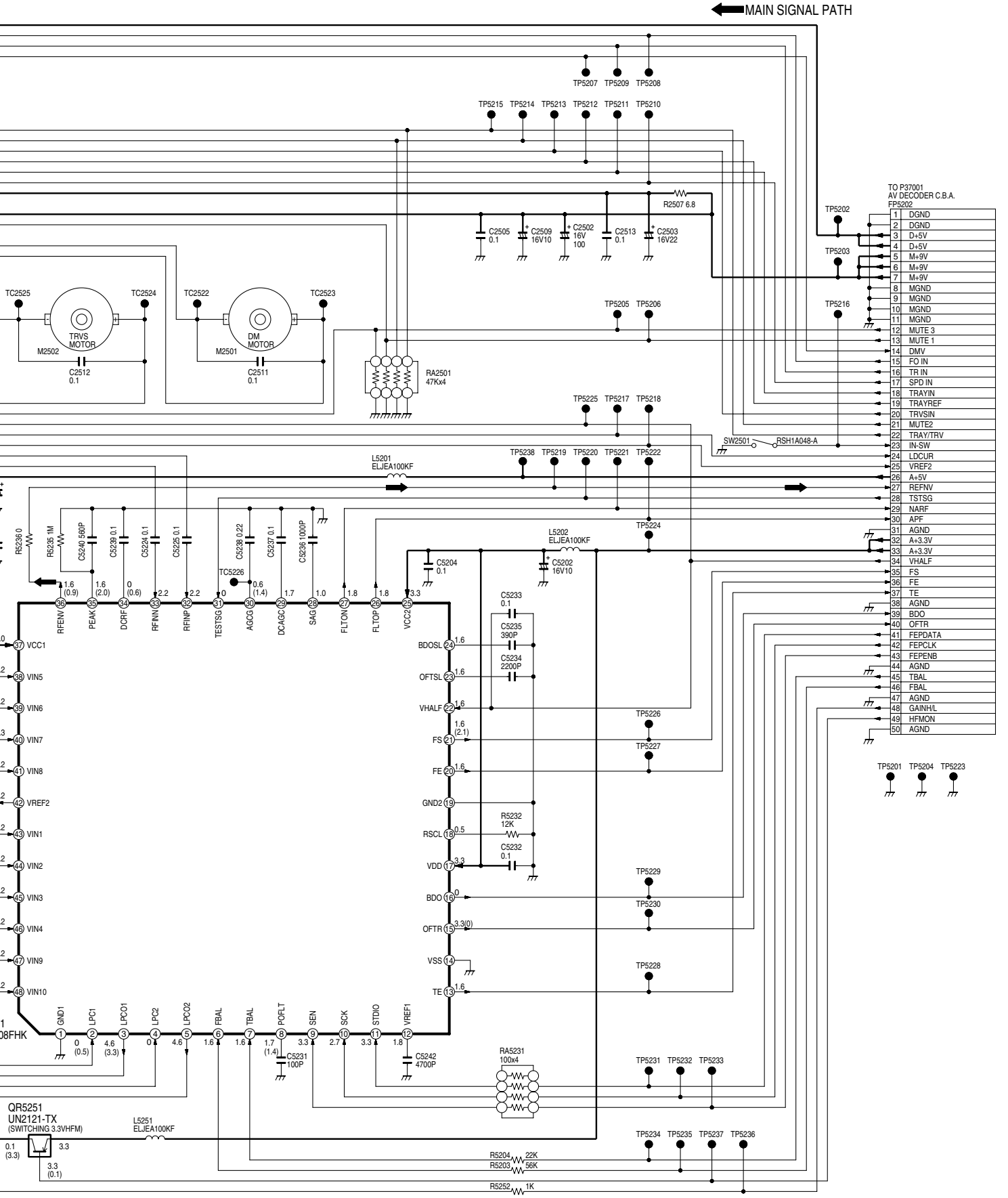
6 | 7 | 8 | 9 | 10 | 11

15.18. FEP & DRV IN TERMINAL SCHEMATIC DIAGRAM



NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS PLAYBACK MODE.

NOTE:DO
IN T

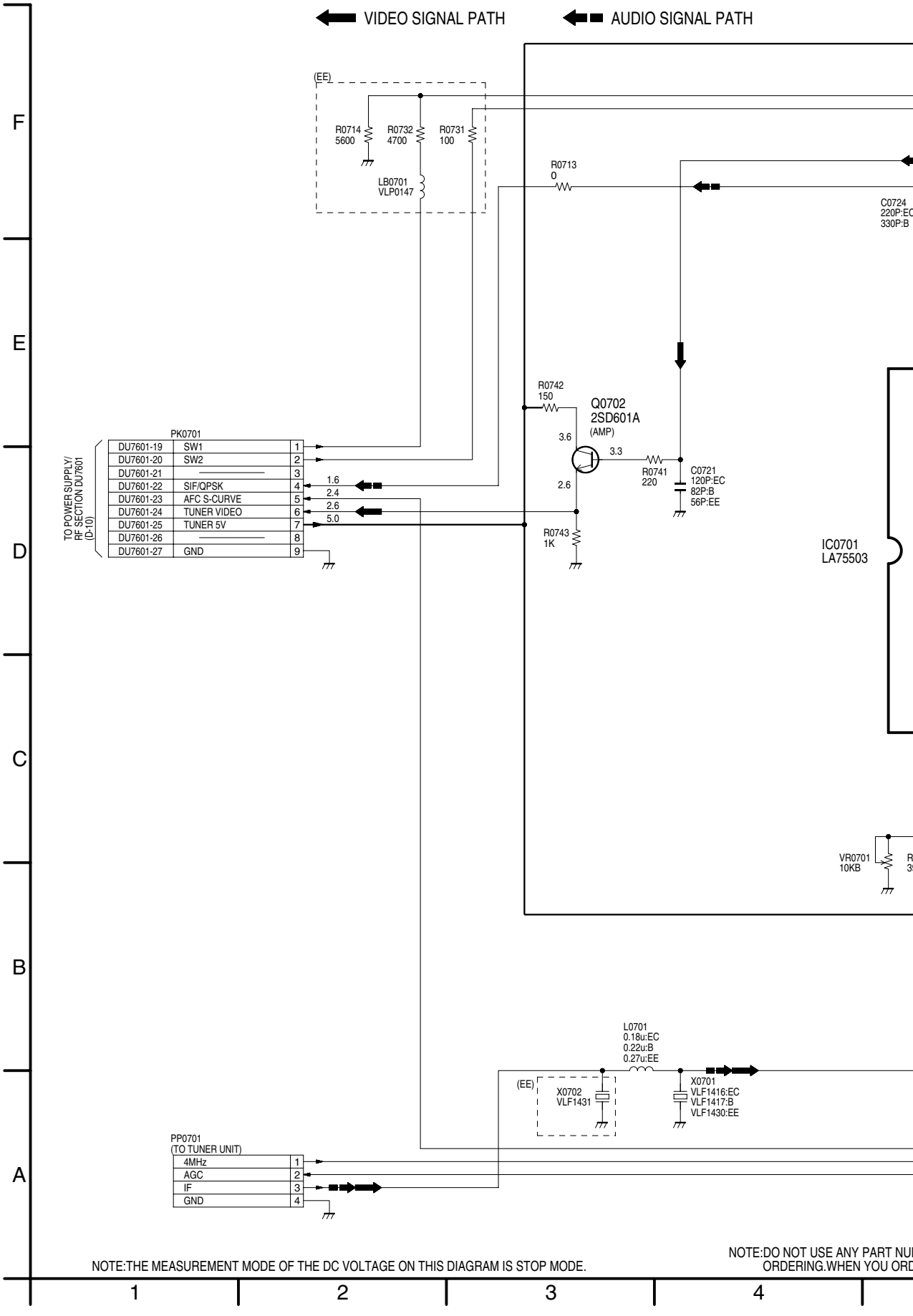


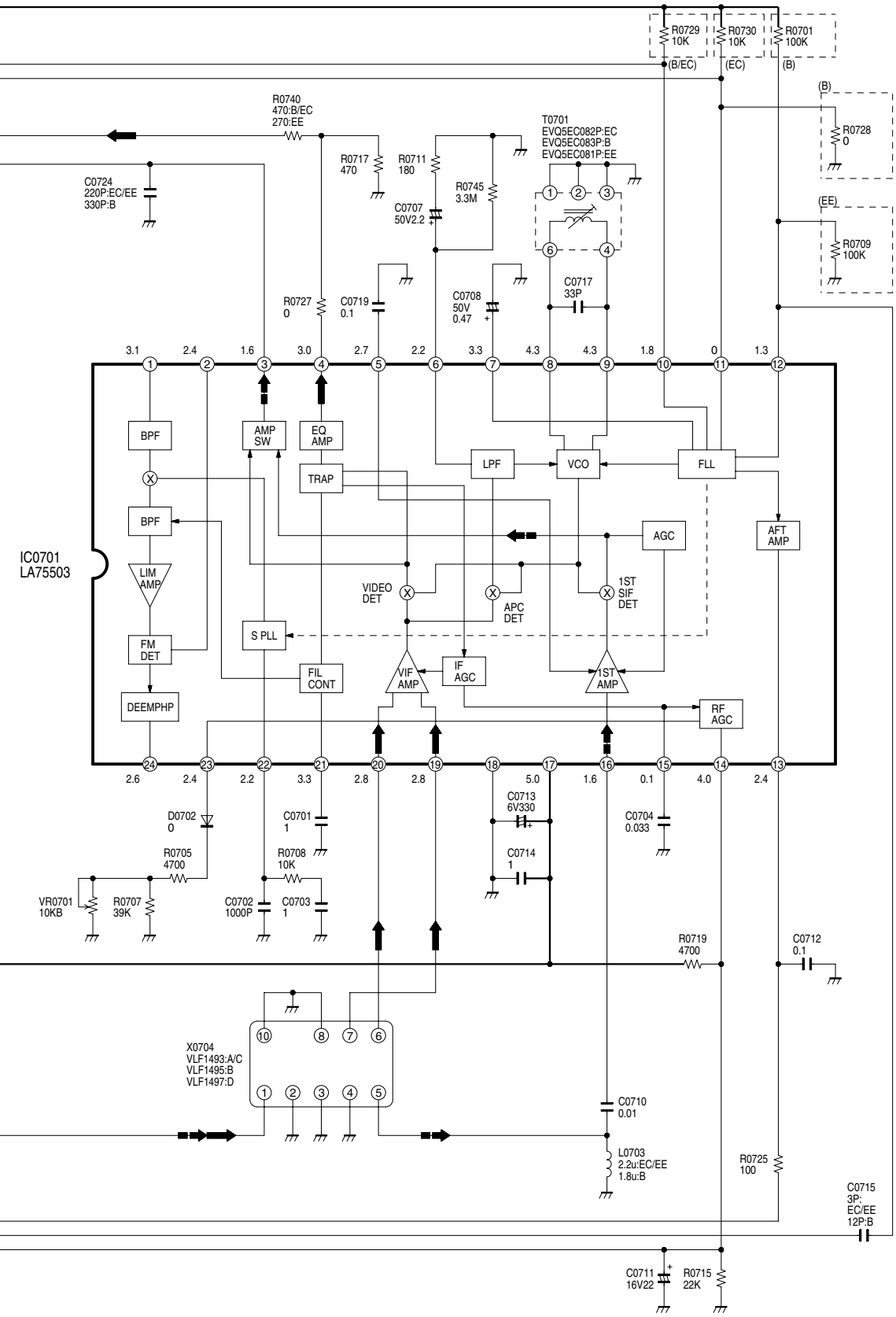
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR OPDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST.AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NV-VHD1B/EC/EE/F
FEP & DRV IN TERMINAL SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10 | 11

15.19. TV DEMODULATOR PACK SCHEMATIC DIAGRAM (NV-VHD1B/EC/EE)



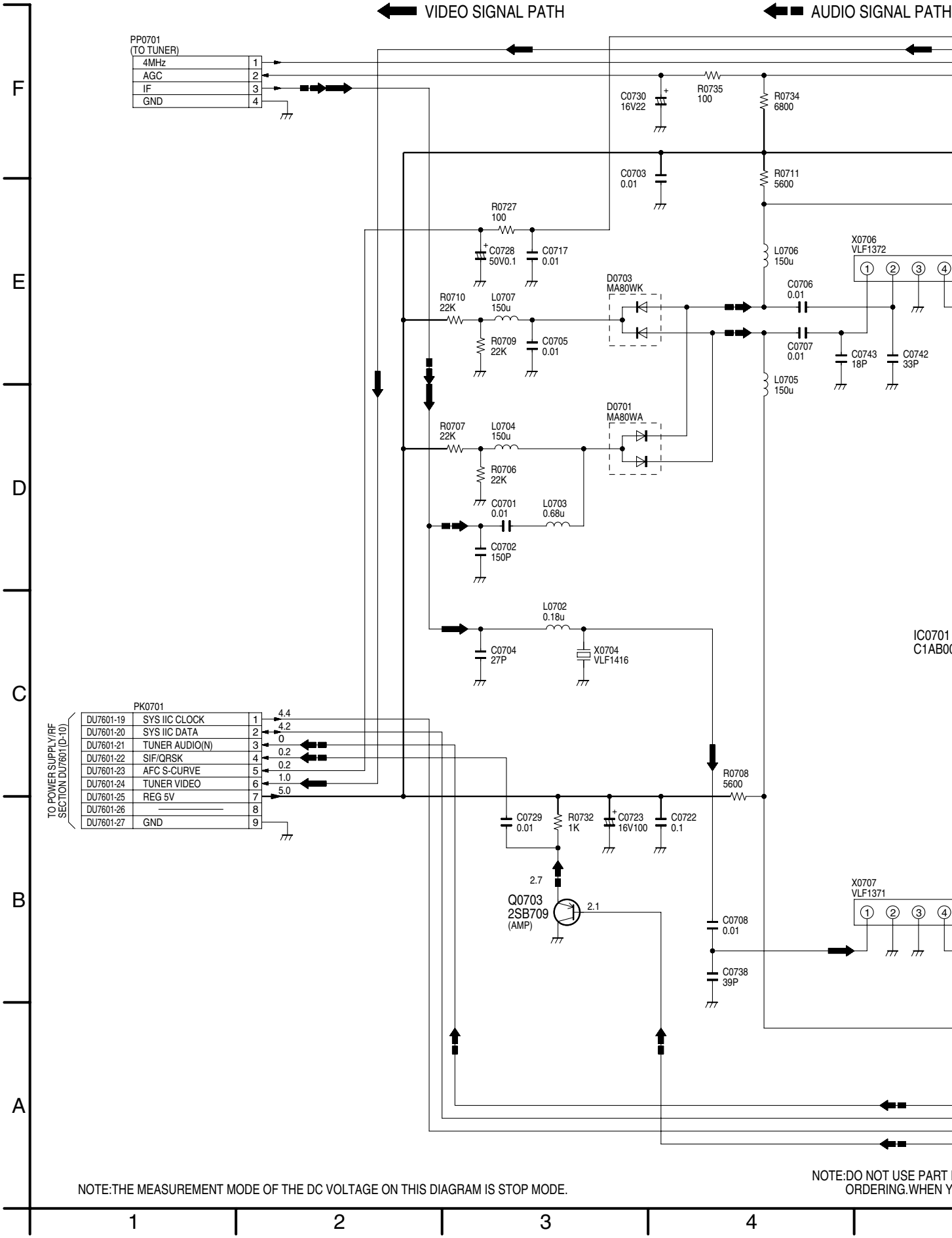


T USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR
ING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

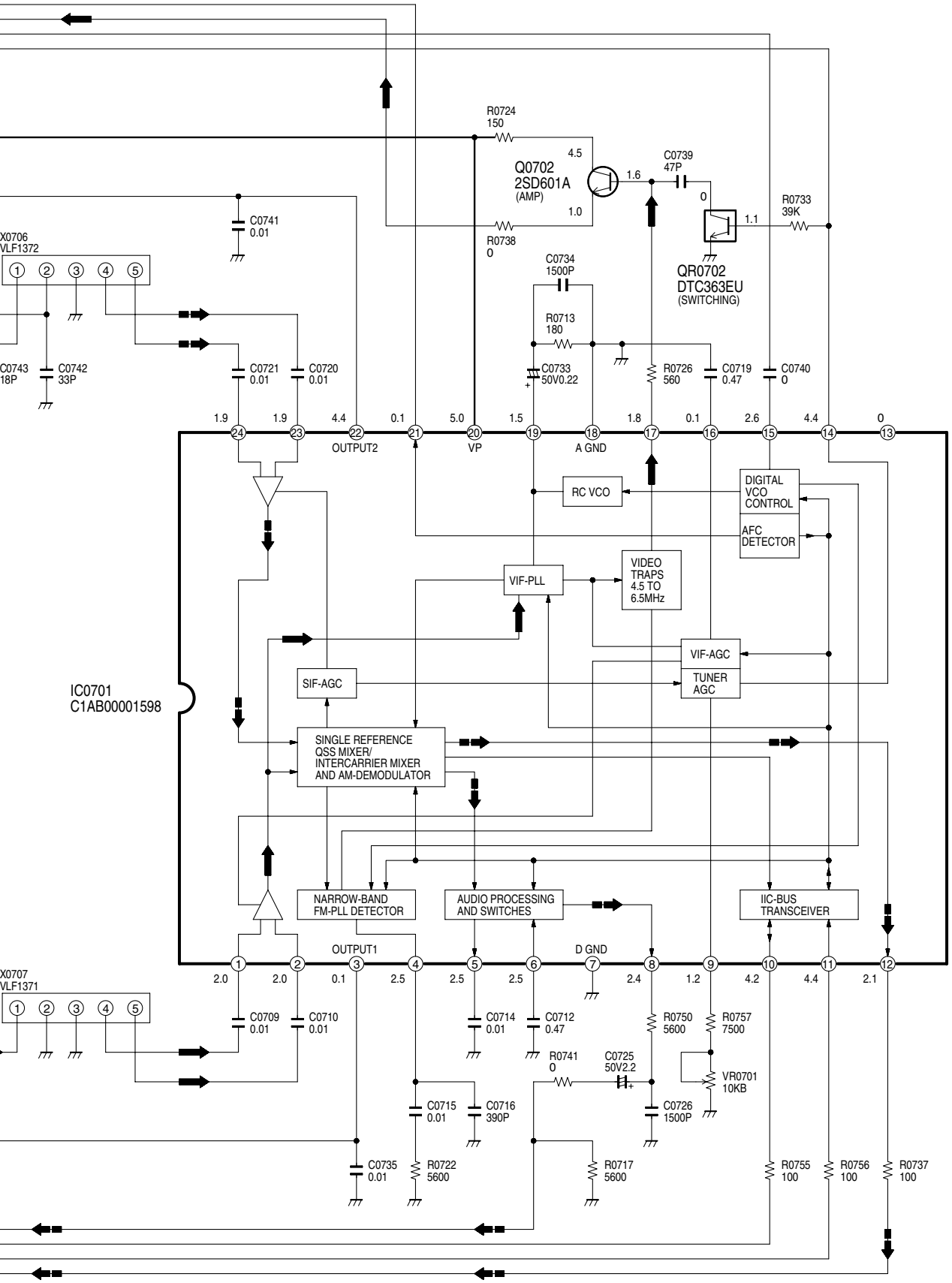
NV-VHD1B/EC/EE
TV DEMODULATOR PACK SCHEMATIC DIAGRAM

5 6 7 8

15.20. TV DEMODULATOR PACK SCHEMATIC DIAGRAM (NV-VHD1F)



) SIGNAL PATH



DO NOT USE PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-VHD1F
TV DEMODULATOR PACK SCHEMATIC DIAGRAM

5 | 6 | 7 | 8

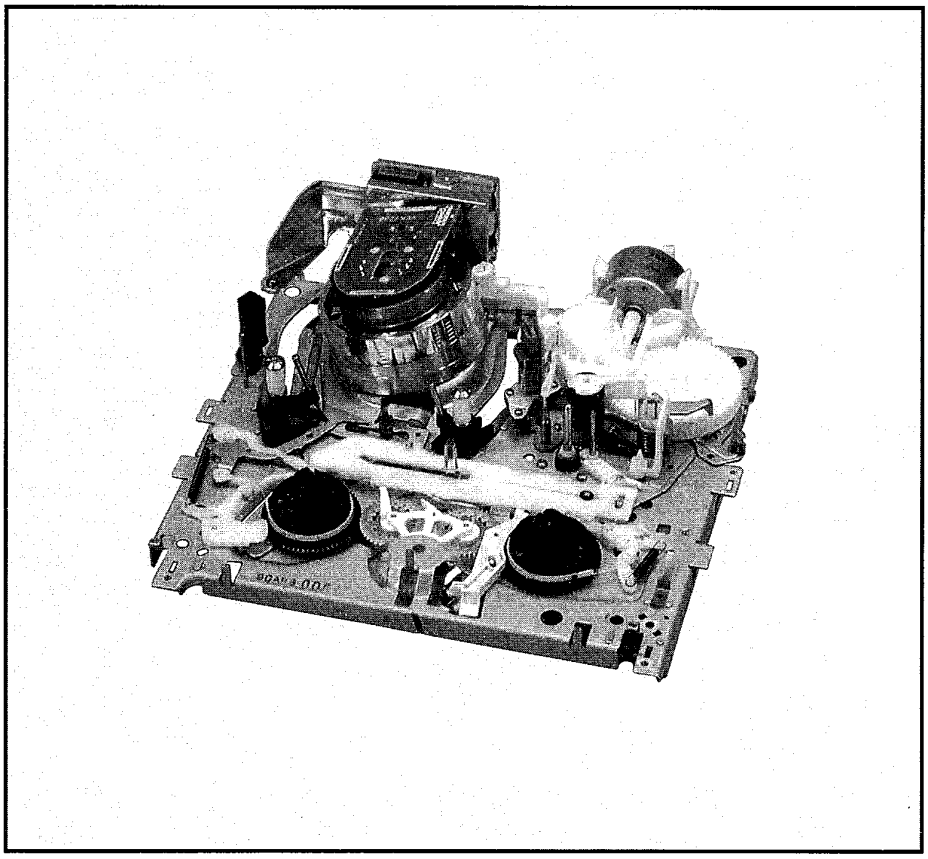
ORDER NO. VRD9712040B8

Service Hints

Video Cassette Recorder

Panasonic VHS

Z-MECHANISM CHASSIS



Panasonic

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

INTRODUCTION

This service hint contains actual repair service result which will allow service personnels to understand and service Z Mechanism, have been got the repair data of Z Mechanism occurred in the market actually.
We expect it will help you to provide the quick and accurate repair service to the customers' VTR mounted Z mechanism.

REMARKS

As mentioned in INTRODUCTION, this service hint have been published by Z Mechanism getting actual repair service data occurred in the market.
Therefore, we expect you will send us the similar repair data for any kinds of models with your cooperation in order to publish the useful technical informations like service hint.

CONTENTS

Z Mechanism phase alignment and checking points ---------- 1
Phenomenon : Cassette tape is not inserted / Tape tangles ---------- 2
Phenomenon : Cassette tape is not inserted / Cassette tape is ejected ---------- 3
Phenomenon : Cassette tape can not ejected / Abnormal sound in FF/REW mode --------- 4
Phenomenon : Tape is not running / Abnormal sound in Playback mode ---------- 5
Phenomenon : Cassette tape is not inserted / Loading is not done ---------- 6
Phenomenon : Tape slack (Self-Test Indication Display F05) ---------- 7
Phenomenon : Cassette tape can not be ejected ---------- 8
Phenomenon : Blue back in Playback mode (No picture or noisy picture) ---------- 9
Phenomenon : A tape is not inserted / Noisy picture in REV mode ---------- 10
Phenomenon : Tape is not running (Capstan does not rotate) ---------- 11/12
Self-Test Indication Display F05 or H02

Z Mechanism phase alignment and checking points

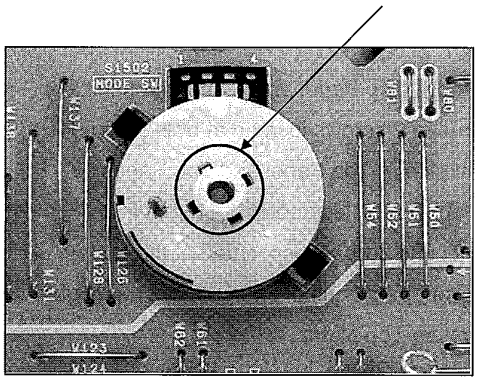
There are 4 phase alignments in Z Mechanism. 3 phase alignments have to be done in Eject position and 1phase alignment has to be done in Cassette down position.
The phase alignments are able to be checked at the following 4 points.

1. Position switch (Mode Switch)
   Rotate Position switch until it reaches to click position.
2. Main cam gear
   Adjust the hole of Main cam gear and the penetration hole of Mechanism chassis.
3. Loading rack
   Adjust the hole that sets the position of Loading rack and the penetration hole of Mechanism chassis.
4. Wiper arm and Drive rack
   Adjust the hole of Drive rack and the gear hole of Wiper arm.

Position switch

Click position of Position switch

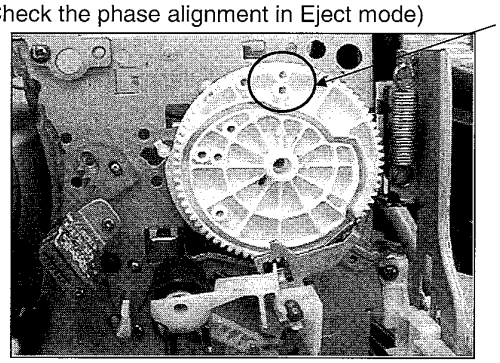
(Check the phase alignment in Eject mode)



Main cam gear

The hole of Main cam gear and the penetration hole of Mechanism chassis

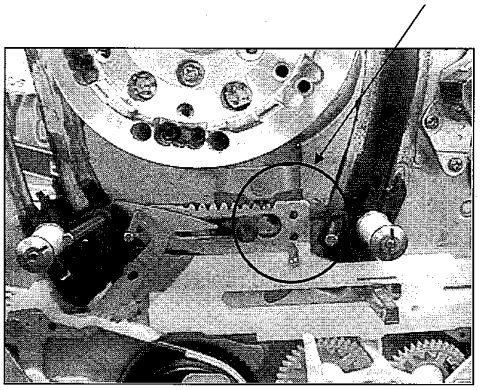
(Check the phase alignment in Eject mode)



Loading rack

The Hole of loading rack and the penetration hole of Mechanism chassis

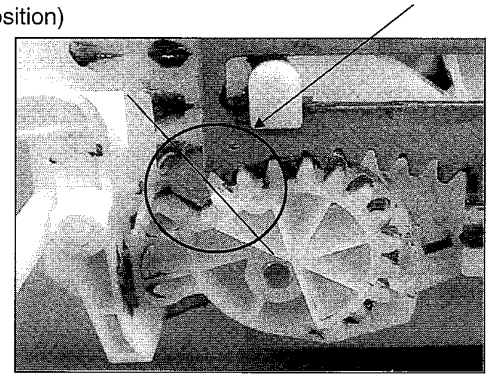
(Check the phase alignment in Eject mode)



Wiper arm and Drive rack

Assign the hole of Drive rack and the hole of Wiper arm on the straight line.

(Check the phase alignment in Cassette down position)



In disassembly and assembly of Z Mechanism, there are 3 phase alignments at gear portion and 4 phase alignments related to arm and lever.

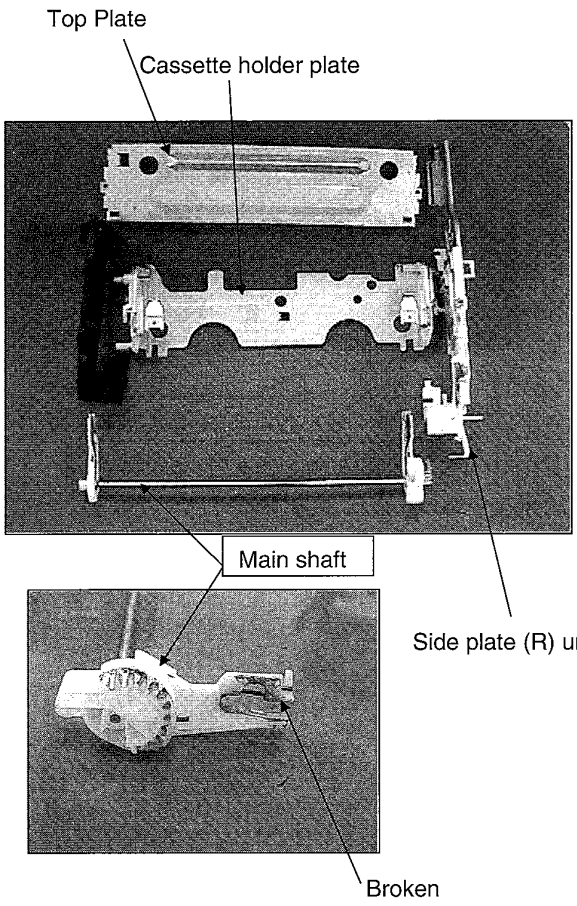
1. Main cam gear
2. Position switch
3. Loading rack
4. Take up / Supply loading arm
5. Drive main arm
6. Conversion lever, P5 arm, Main lever
7. Drive rack arm

Phenomenon : Cassette tape is not inserted / Tape tangles

Diagnosis and Disposal

Checking	Judgement	Disposal
Cassette tape does not move to Cassette down position	Break-down of the plastic portion in Main shaft	Replacement of Main shaft (VXP1730)
Tape tangles	Deformation of Side plate or out of gear phase alig-nment in Wiper arm and Drive rack	Replacement of Side plate (R) unit (VXA5740)

Parts location



Remove of Cassette holder unit

1. Remove Top Panel and Front panel unit.
   Remove 2 screws located at both left and right side of Top Panel and Top Panel.
   Unlock 4 tabs located at the top of Front panel unit and 3 tabs located at the bottom of Front panel unit. Remove Front panel unit.
2. Remove Top plate.
   Unlock 4 tabs located at both left and right side of Top plate softly and remove Top plate.
3. Remove Cassette holder plate.
   Keep pressing 2 stoppers on Cassette holder plate and press Cassette holder plate to the rear of VTR and remove it from left and right side plate unit.
4. Remove Left and Right side plate unit.
   Remove Connection spring of Drive gear and remove 3 red screws and remove Left and right side plate unit.
5. Remove Main shaft and replace it.

Remarks

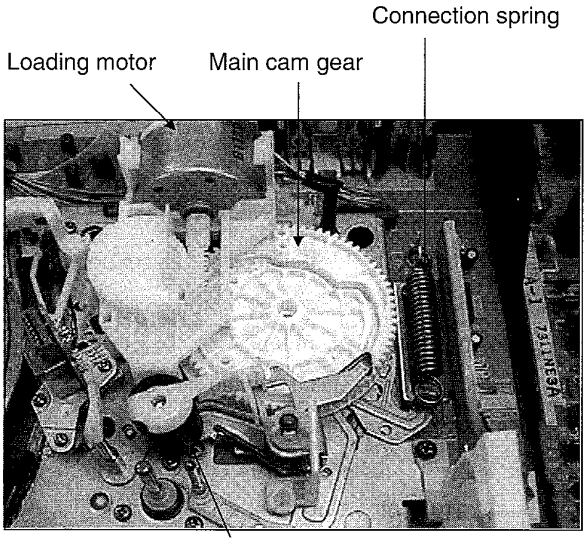
The plastic portion in Main shaft is broken so that Cassette holder unit can not advance.

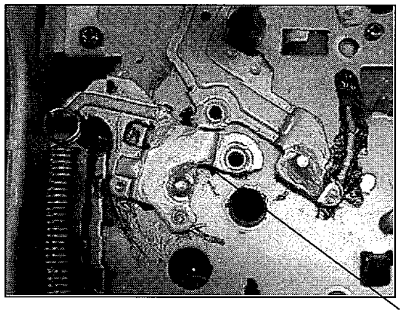
Phenomenon : Cassette tape is not inserted/Cassette tape is ejected

Diagnosis and Disposal

Checking	Judgement	Disposal
Cassette tape floats during loading	Deformation of Drive rack arm located under Main cam gear	Replacement of Drive rack arm (VML3165)

Parts location





On Mechanism unit

1. Remove Mechanism unit.
   -Remove 5 screws that fix Mechanism unit.
   -Disconnect some connectors.
   -Remove Mechanism unit.
2. Remove Pinch arm unit.
   -Unlock the tab of Opener piece and remove Opener piece.
   -Remove Pinch arm unit.
3. Remove Loading motor unit.
   Unlock 3 tabs of Loading motor unit and remove Loading motor unit.
4. Remove Main cam gear.
   Remove Snap washer located at the bottom of Mechanism chassis and remove main cam gear.
5. Remove Drive rack arm.
   Rotate Drive rack arm to the counterclock-wise and remove Drive rack arm.
   Then replace Drive rack arm.

* The mechanism phase alignment has to be done.
  Adjust the hole of Main cam gear and the penetration hole of Mechanism chassis.
  Adjust the hole that sets the position of Loading rack and the penetration hole of mechanism Chassis.

Remarks

Snap washer is very hard so that take care the disassembly of Snap washer during removing Main cam gear.

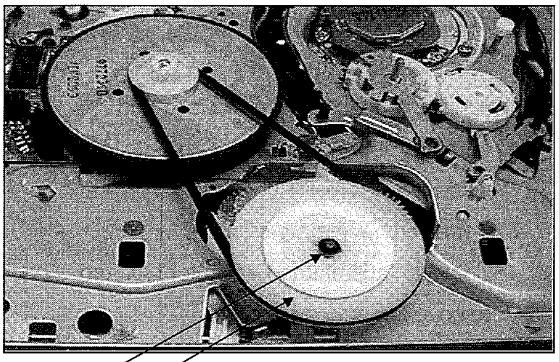
Phenomenon : Cassette tape can not ejected

Abnormal sound in FF/REW mode

Diagnosis and Disposal

Checking	Judgement	Disposal
Mis-function of Mechani-sm or abnormal sound in Mechanism	The rotation of Centre clutch unit is heavy	Replacement of Centre clutch unit (VXP1850 or VXP1732) No. of Centre clutch unit is different depend on the model No.

Parts location

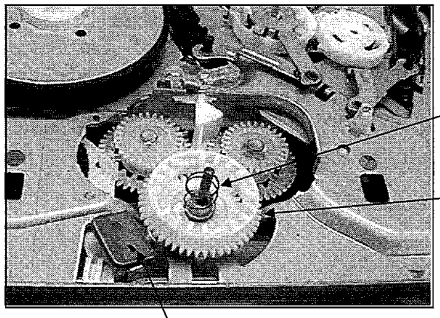


Washer

Centre clutch unit

On Mechanism unit

1. Remove Mechanism unit.
   -Remove 5 screws that fix Mechanism unit.
   -Disconnect some connectors.
   -Remove Mechanism unit.
2. Remove centre clutch located at the bottom of Mechanism chassis.
   -Remove Capstan belt and Washer and remove centre clutch unit while pressing conversion lever B to the bottom.
   After confirming the rotation of Centre clutch unit individually, replace it.



Conversion gear spring

Conversion gear

Conversion lever B

Remarks

Centre clutch unit failure is thought. When rotate Centre clutch unit individually, the rotation of Centre clutch unit is uneven.

Phenomenon : Tape is not running

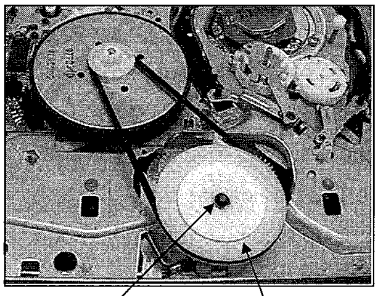
Abnormal sound in playback mode

Diagnosis and Disposal

Checking	Judgement	Disposal
Tape running is abnormal or Abnormal sound in Mechanism unit	Engagement between Idler arm unit and Centre clutch unit is not so good.	Replacement of Idler arm unit (VXL2792)

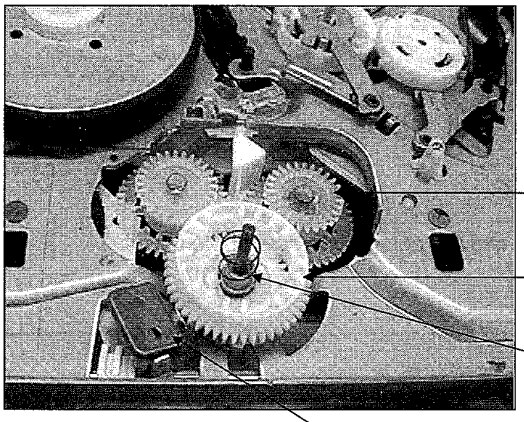
Parts location

Bottom of Mechanism unit



Washer

Centre clutch unit



Conversion lever B

On Mechanism unit

1. Remove Mechanism unit.
   - -Remove 5 screws that fix Mechanism unit.
   - -Disconnect some connectors.
   - -Remove Mechanism unit.
2. Remove Centre clutch unit located at the bottom of Mechanism chassis.
   - -Remove Capstan belt and Washer.
   - -Remove Centre clutch unit while pressing Conversion lever B to the bottom.
3. Remove Idler arm unit.
   Remove Conversion gear and Conversion gear spring and remove Idler arm unit.

Idler arm unit

Conversion gear

Conversion gear spring

Remarks

Engagement of gear of Idler arm unit is bad.

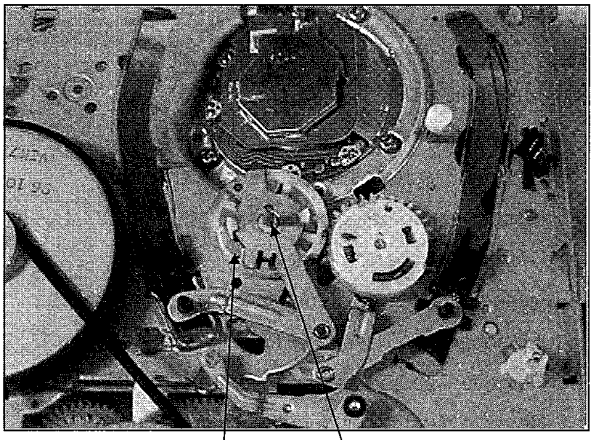
Phenomenon : Cassette tape is not inserted / Loading is not done

Diagnosis and Disposal

Checking	Judgement	Disposal
Loading is not done	-Roller post is not fixed -Take up loading arm is out of position	Replacement of Take up loading arm (VXL2670)

Parts location

On mechanism unit



1. Remove Mechanism unit.
   -Remove 5 screws that fix Mechanism unit.
   -Disconnect some connectors.
   -Remove Mechanism unit.
2. Replacement of Take up loading arm.
   -Unlock the tab of Take up loading arm located at the bottom of Mechanism chassis and remove Take up loading arm.
   -Replace Take up loading arm. When mount Take up loading arm, the arrow mark mentioned on the gear of Take up loading arm has to be adjusted to the gear of Supply loading arm.

* The Mechanism phase alignment has to be done.
  Adjust the hole of Main cam gear and the penetration hole of Mechanism chassis.
  Adjust the hole that sets the position of loading rack and the penetration hole of Mechanism chassis.

Remarks

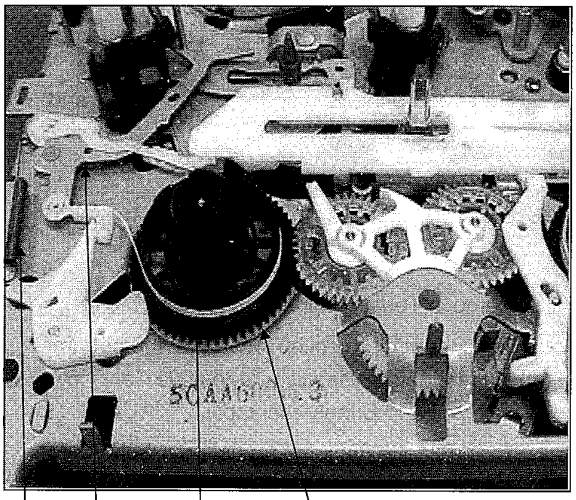
The tab of Take up loading arm loosens and Take up loading arm is not fixed to the pin so that Take up loading arm get out of position.

Phenomenon : Tape slack (Self-Test Indication Display F05)

Diagnosis and Disposal

Checking	Judgement	Disposal
Cassette tape is floating in cassette down position	Cassette tape is not engaged with Supply reel table (Engagement of cassette tape with Supply reel table is bad) (Tape is not wound)	Replacement of Supply reel table (VDR0346)

Parts location



On Mechanism unit

1. Remove Mechanism unit.
   -Remove 5 screws that fix Mechanism unit.
   -Disconnect some connectors.
   -Remove Mechanism unit.
2. Remove Cassette holder unit.
   Remove Connection spring of Drive gear and remove 3 red screws and then remove Cassette holder unit.
3. Remove Tension arm unit and Supply reel table
   Remove Tension spring. Unlock the tab of Tension arm projection located at the bottom of Mechanism chassis and remove Tension arm unit and Supply reel table. Then replace Tension arm unit and Supply reel table.

Remarks

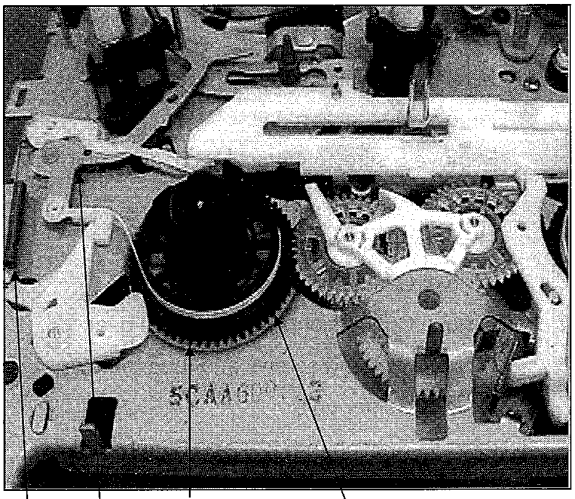
The engagement with gear portion of Supply reel table and cassette tape is bad so that cassette tape is not set to the regular position.

Phenomenon : Cassette tape can not be ejected

Diagnosis and Disposal

Checking	Judgement	Disposal
Unloading is not done	Release of Tension band or deformation of Tension arm	Replacement of tension arm (VXL2793)

Parts location



On Mechanism unit

1. Remove Mechanism unit.
   -Remove 5 screws that fix mechanism unit.
   -Disconnect some connectors.
   -Remove Mechanism unit.
2. Remove Cassette holder unit.
   Remove Connection spring of Drive gear and remove 3 red screws.
   Then remove Cassette holder unit.
3. Remove Tension arm unit and Supply reel table.
   Remove Tension spring. Unlock the tab of Tension arm projection located at the bottom of Mechanism chassis and remove Tension arm unit and Supply reel table.
   Then replace tension arm unit and Supply reel table.

Remarks

Tension band comes off Supply reel table and tape is not wound.

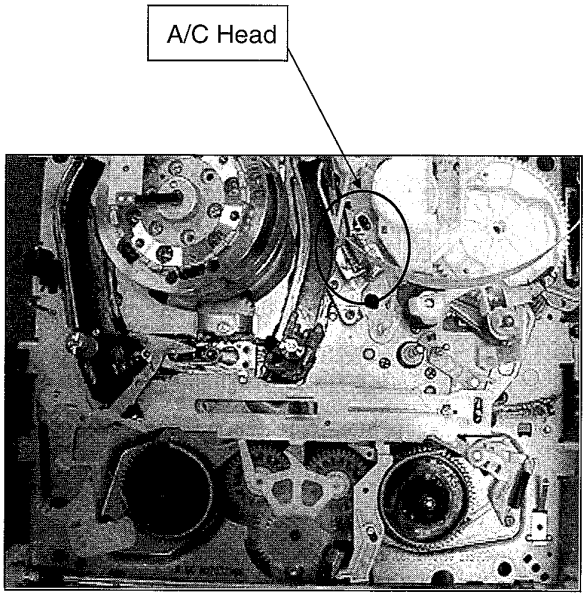
Phenomenon : Blue back in playback mode

(No picture or noisy picture)

Diagnosis and Disposal

Checking	Judgement	Disposal
A/C Head condition	Clog of A/C Head or A/C Head failure	Cleaning of A/C Head or replacement of A/C Head (VED0412)

Parts location



1. Remove Top Panel.
   Remove 2 screws that locate on both left and right side of Top Panel and Top Panel.
2. Clean the surface of A/C Head.
3. Replace A/C Head.
   Remove 1 screw that fix A/C Head and replace A/C Head.

* The tape running adjustment has to be done after replacing A/C Head.

The other phenomenon

- Playback picture is disarranged and playback audio mutes.
- Repeat LP mode and SP mode.
- No function of counter.

Remarks

Since A/C Head is clogged and control signal is not detected, above phenomenon appears.
(Control signal is not detected so that blue back appears.)

Phenomenon : A tape is not inserted

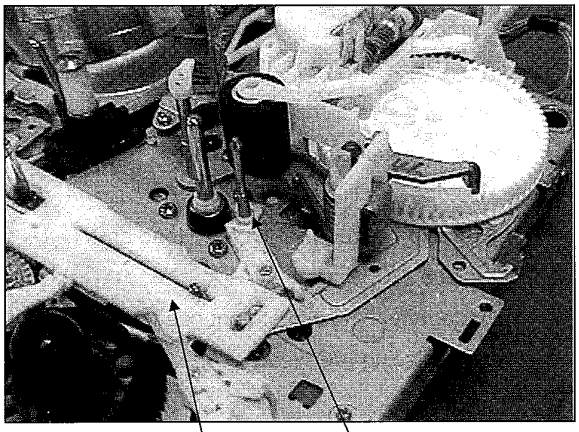
Noisy picture in REV mode

Diagnosis and Disposal

Checking	Judgement	Disposal
Cassette tape does not move to cassette down position	Bend of P5 arm 1. Cassette tape catch in cassette holder unit 2. Tape running is unstable.	Replacement of P5 arm (VXL2677)
Noisy picture in playback mode		

* The phenomenon varies depend on the degree of the bend of P5 arm.
  Example : Noisy picture

Parts location



On Mechanism unit

1. Remove mechanism unit.
   -Remove 5 screws that fix Mechanism unit.
   -Disconnect some connectors.
   -Remove Mechanism unit.
2. Remove Main lever and P5 arm.
   Unlock 2 tabs that fix LED prism and 1 tab that fix the projection on Mechanism chassis while lifting the left side of Main lever a little and remove Main lever and P5 arm. Then replace Main lever and P5 arm.

* The Mechanism phase alignment has to be done.
  Adjust the hole of Main cam gear and the penetration hole of Mechanism chassis.
  Adjust the hole that sets the position of Loading rack and the penetration hole of Mechanism chassis.

Remarks

The plastic portion of P5 arm is broken or P5 arm is bent.

Phenomenon : Tape is not running (Capstan does not rotate)

Self-Test Indication Display F05 or H02

Diagnosis and Disposal

NV-HD670A/EA/BD, HD620A/EA/AM/EU/BD, HD625AM, SD570AM/EU

Checking	Judgement	Disposal
Cap.R/F (Capstan rotation direction control) at pin 7 of IC0201 in Capstan drive circuit (Cap.ED/S at pin 10 of IC6001)	Confirmation of the voltage for Hole element at pin 9 of IC0201 and Motor driving voltage at pin 22, 24 and 25 of IC0201	Replacement of Capstan unit (VEK8239) The inside of IC0201 is broken and IC0201 is being supplied with Capstan unit as one unit

NV-SD320AM, SD420A/EA/SA/EU

NV-SD270A/EA/SA, SD225AM/AMJ/EU, SD220AM/AMJ/A/SA, SD210SA

Checking	Judgement	Disposal
Cap.R/F (Capstan rotation direction control) at pin 7 of IC0201 in Capstan drive circuit (Cap.ED/S at pin 10 of IC6001)	Confirmation of the voltage for Hole element at pin 9 of IC0201 and Motor driving voltage at pin 22, 24 and 25 of IC0201	Replacement of Capstan unit (VEK8024) The inside of IC0201 is broken and IC0201 is being supplied with Capstan unit as one unit

NV-HD620BR/PM, SD420AR/BR/PM

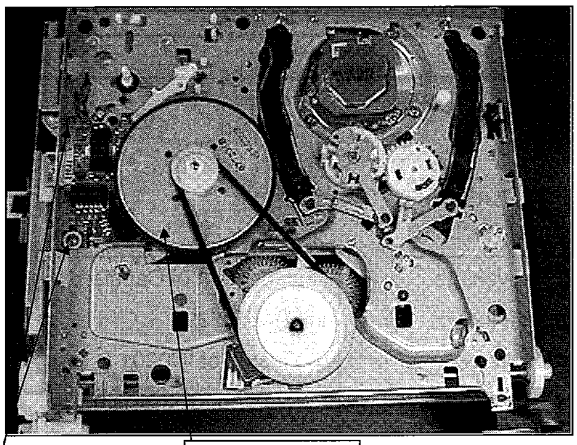
Checking	Judgement	Disposal
Cap.R/F (Capstan rotation direction control) at pin 7 of IC0201 in Capstan drive circuit (Cap.R/F at pin 12 of IC6001)	Confirmation of the voltage for Hole element at pin 9 of IC0201 and Motor driving voltage at pin 22, 24 and 25 of IC0201	Replacement of Capstan unit (VEK8239) The inside of IC0201 is broken and IC0201 is being supplied with Capstan unit as one unit

The other phenomenon

Capstan runs away so that cassette tape can not be ejected or VTR is placed to CUE mode even though VTR is set in SP playback mode.

Parts location

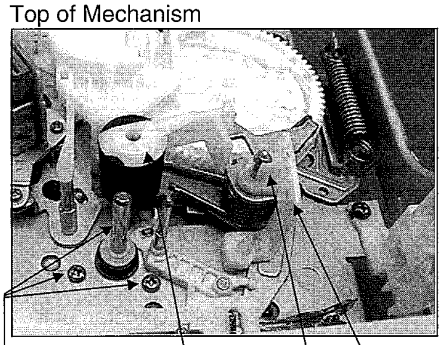
Bottom of Mechanism



1. Remove Top Panel and Front Panel unit.
   -Remove 2 screws located at both left and right side of Top Panel and Top Panel.
   -Remove 7 tabs located at top and bottom of Front Panel unit and Front Panel unit.
2. Remove Mechanism unit.
   -Remove 5 screws that fix Mechanism unit.
   -Disconnect some connectors.
   -Remove Mechanism unit.
3. Replacement of Capstan unit.
   -Unlock the tab of Opener piece and remove Opener piece. Remove Pinch arm unit.
   -Remove 3 screws that mount Capstan unit at the top of Mechanism unit.
   Remove 2 screws that mount Capstan unit at the bottom of Mechanism unit.
   Remove Capstan unit and replace capstan unit.

Concerning more detailed disassembly method, refer to Service Manual for Z Mechanism (Order No. VRD9612M129)

Top of Mechanism



Checking point

The requirement condition to be driven Capstan of IC0201

1. Cap R/F (Capstan rotation direction control) at pin 7 of IC0201 has to be Low voltage.
2. VCC at pin 28 of IC0201 has to be 5V.
3. Motor voltage at pin 19 of IC0201
4. Torque voltage at pin 10 of IC0201
5. Current detection at pin 23 of IC0201
6. Hole element at pin 9 of IC0201

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